Standalone Digital Video Recorder

Premium DVR
4, 8, 16 Channel Models

User`s Manual

NEXS CORPORATION

This document contains preliminary information and is subject to change without notice.

FCC Compliance Statement

Notice to Users**:** This equipment has been tested and found to comply with the limits for a Class A digital device. Pursuant to Part 15 of the FCC Rules, these limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at own expense.

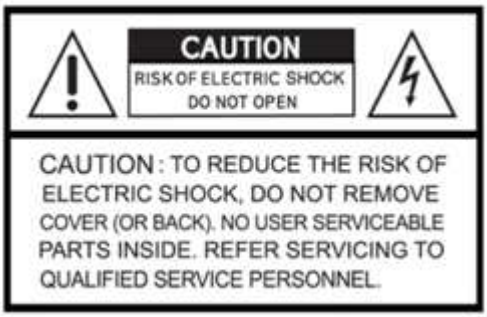
CAUTION
CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

The equipment complies with the requirement of FCC CFR 47 PART 15 SUBPART B, Class A.

Explanation of Graphical Symbols

This symbol indicates the presence of important operating and maintenance (servicing) instruction in the literature accompanying the product.

This symbol indicates the presence of non-insulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

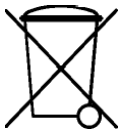
Warnings

- Installation and servicing should be performed only by qualified and experienced personnel.
- Power off the DVR when connecting cameras, audio, or sensor cables.
- The manufacturer is not responsible for any damage caused by improper use of the product or failure to follow instructions for the product.
- The manufacturer is not responsible for any problems caused by or resulting from the user physically opening the DVR for examination or attempting to fix the unit.
- The manufacturer may not be held liable for any issues with the unit if any labels are removed in the product.

Caution

- This product has free voltages (100V ~ 240V). See installation instructions before connecting to the power supply.
- This product uses a Lithium battery.
- To avoid any risk of explosion, do not replace the battery on the main board by anything other than a Lithium battery.
- Dispose of used batteries according to the manufacturer's instructions.
- This equipment and all communication wirings are intended for indoor use only.
- To reduce the risk of fire or electric shock, do not expose the unit to rain or moisture.

WEEE (Waste Electrical and Electronic Equipment)



Customers are advised to dispose this product, at the end of its useful life, as per applicable local laws, regulations and procedures.

Important Safeguards

1. **Read Instructions**
   - To reduce the risk of fire or electric shock, do not expose the unit to rain or moisture.
2. **Retain Instructions**
   - The safety and operating instructions should be retained for future reference.
3. **Cleaning**
   - Unplug this equipment from the wall outlet before cleaning it. Do not use liquid aerosol cleaners. Use a damp soft cloth for cleaning.
4. **Attachments**
   - Never add any attachments and/or equipment without manufacturer approval as such additions may result in the risk of fire, electric shock, or other personal injury.
5. **Water and/or Moisture**
   - Do not use this equipment near water or in contact with water.
6. **Accessories**
   - Do not place this equipment on an unstable cart, stand or table. The equipment may fall, causing serious injury to a child or adult and serious damage to the equipment.
   - Wall or shelf mounting should follow the manufacturer's instructions and should use a mounting kit approved by the manufacturer.

   - Move this equipment and cart combination with care. Quick stops, excessive force and uneven surfaces may cause the equipment and cart combination to overturn.
7. **Power Sources**
   - This equipment should be operated only from the type of power source indicated on the marking label. If not sure the type of power, please consult to distributor or local power company.
8. **Power Cords**
   - Operator or installer must remove power, BNC, alarm and other connections before moving the equipment.
9. **Lightning**
   - For added protection for this equipment during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the equipment due to lightning and power-line surges.
10. **Overloading**
    - Do not overload wall outlets and extension cords to avoid the risk of fire or electric shock.
11. **Objects and Liquids**
    - Never push objects of any kind through openings of this equipment as they may touch dangerous voltage points or short out

parts that could result in a fire or electric shock.

- Never spill liquid of any kind on the equipment.

12. Servicing

- Do not attempt to service this equipment yourself. Refer all servicing to qualified service personnel.

13. Damage Requiring Service

- Unplug this equipment from the wall outlet and refer servicing to qualified service personnel under the following conditions:
  - ① When the power-supply cord or the plug has been damaged.
  - ② If liquid is spilled or objects have fallen into the equipment.
  - ③ If the equipment has been exposed to rain or water.
  - ④ If the equipment does not operate normally by following the operating instructions, adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the equipment to its normal operation.
  - ⑤ If the equipment has been dropped or damaged the cabinet.
  - ⑥ When the equipment exhibits a distinct change in performance—this indicates a need for service.

14. Replacement Parts

- When replacement parts are required, ensure the service technician uses replacement parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

15. Safety Check

- Upon completion of any service or repairs to this equipment, ask the service technician to perform safety checks to determine that the equipment is in proper operating condition.

16. Field Installation

- This installation should be made by a qualified service person and should conform to all local codes.

17. Correct Batteries

CAUTION
RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.
DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS

18. Operating Temperature

- An operating temperature range is specified so that the customer and installer may determine a suitable operating environment for the equipment.

19. Elevated Operating Ambient Temperature

- If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the specified operating temperature range.

20. Reduced Air Flow

- Installation of the equipment in the rack should be such that the amount of airflow required for safe operation of the equipment is not compromised.

21. Mechanical Loading

- Mounting of the equipment in the rack should be such that a hazardous condition is not caused by uneven mechanical loading.

22. Circuit Overloading

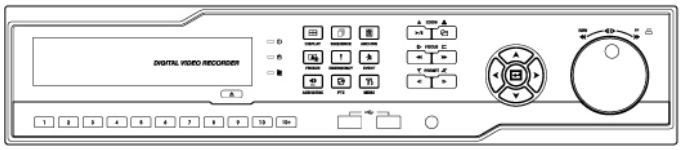
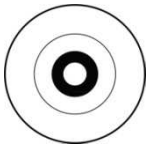
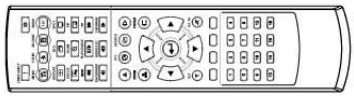
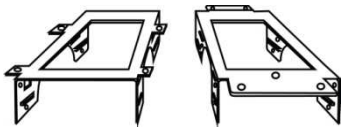
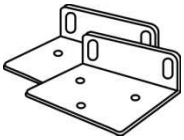
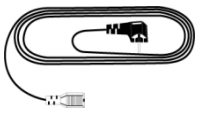
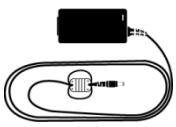
- Consideration should be given to connection of the equipment to supply circuit and the effect that overloading of circuits might have on over-current protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

23. Grounding (Earthing)

- Connection of ground wire is highly recommended to protect the DVR from external electric shock, such as lightening, electrical surge.

WARNING
WARRANTY IS VOID IF SEAL OR LABEL IS REMOVED OR DAMAGED.

The List of Configuration

DVR Set	**IQ-SDI-4 (Mini) : 4CH** **IQ-SDI-8/16** 
Manual / CMS CD	
Remote Controller	
Manual	
Screws	
HDD Brackets **(Except A Type Model)**	
Rack Bracket **(Except A Type Model)**	
Data Cable	
Power Cable	
Adapter **(Except D and E Type Models)**	

Operation Precautions

Power Off

- Do not turn DVR off, or plug off the power adapter while DVR is in operation (record/playback). Otherwise, it may cause permanent damage to the equipment. Please click (↵) SETUP>SYSTEM>Shutdown sequentially and then remove the power after DVR is shutdown completely. It is safe to wait for 5 seconds before turning the power on again.
- Do not turn DVR off, or plug off the power adapter while External storage device (e.g., USB memory stick, removable external hard disk and the like) in use. Otherwise, it may cause permanent damage to the equipment. Make sure that the power switch is in the "ON" position until data storage is completed. Please be aware that removing the storage device cause the same damage to the equipment.
- Do not turn DVR off, or plug off the power adapter during the format of the hard disk. Otherwise, it may cause permanent damage to the equipment. Make sure that the power switch is in the "ON" position until the formatting of the disk is completed.

HDD Installation / Addition / Moving / Replacement / Removal

- For installation/addition/replacement/Removal of HDD (DVD-RW), make sure that DVR is turned off. Otherwise, it may cause permanent damage to the HDD (DVD-RW).
- When wish to power DVR off, please click (↵) SETUP>SYSTEM>Shutdown sequentially and then remove the power after DVR is shut down completely.
- **Installation/Addition/Moving/Replacement:** Start 'HDD initialization' including formatting. Otherwise, DVR would not recognize the hard disk and may begin to function abnormally. Please follow the below procedure for 'HDD initialization'.
  ① (Date/Time setup) Set up the current date and time (SETUP>SYSTEM>Admin>Date/Time).
  ② (Initialization of system setup) All setup values are restored to original factory default settings. (SETUP>SYSTEM>Information>Status>Setup>Default).
  ③ (HDD format) HDD format is done by SETUP>SYSTEM>Admin>Storage>Format. If there are more than two HDDs, each must be formatted, separately. When the format is completed, DVR will auto-reboot.
- **Removal:** Follow the Remove procedure even when a pre-installed hard disk has been removed.
  - SETUP>SYSTEM>Admin>Storage>Format, click (↵) 'Removed' item under the discrete Format headings of a corresponding HDD to discard 'HDD' item. When the Remove procedure is completed, DVR will auto-reboot.

Date / Time Change

- Any change in Date/Time is immediately applied onto live video (LIVE), but the date/time when the recording was done are not changed.
- Make sure to reboot DVR after adjusting the Date/Time.
- Also, do not forget to execute SETUP>SYSTEM>Shutdown in sequence before reboot.

Upgrade

- Do not upgrade until install a hard disk drive. Make sure that upgrade when the hard disk drive is in proper operation.

Using a Mouse

- **Left mouse button:** have the same function as **Enter (↵)** on the Front panel of DVR.
- **Central button (wheel):** have the same function as **Search** key on the Front panel of DVR (display search menu).
- **Right mouse button:** display a number of 'Function keys' (please see 'Input Device and Screen Icons>Using a mouse' in this manual).

PLAY / PAUSE Key

- Press the **PLAY/PAUSE** key to one-touch playback on the viewing screen (playback the recorded video from the last one minute).
- Every time pressing the **PLAY/PAUSE** key during playback mode, it is changed to '1X PLAY' and 'PAUSE'. The displayed sign on the screen also changes from ▶ to **II**.
- If wish to change mode (1X PLAY, REW, FF, BACKWARD, FORWARD) during playback, always press the **PLAY/PAUSE** key first (please see if the sign **II** is shown on the screen).
- Press the **PLAY/PAUSE** key to back up. Make sure that the backup is done in 'PAUSE' mode.

Camera Title

- Camera Title displayed in Record and Playback modes of DVR is set to CAM1 ~CAM16. Registering camera title in setup menu (DEVICES>Camera/PTZ>Title) is to make every setup process easier.

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NOTES :

1. Product Features

1.1 Unpacking

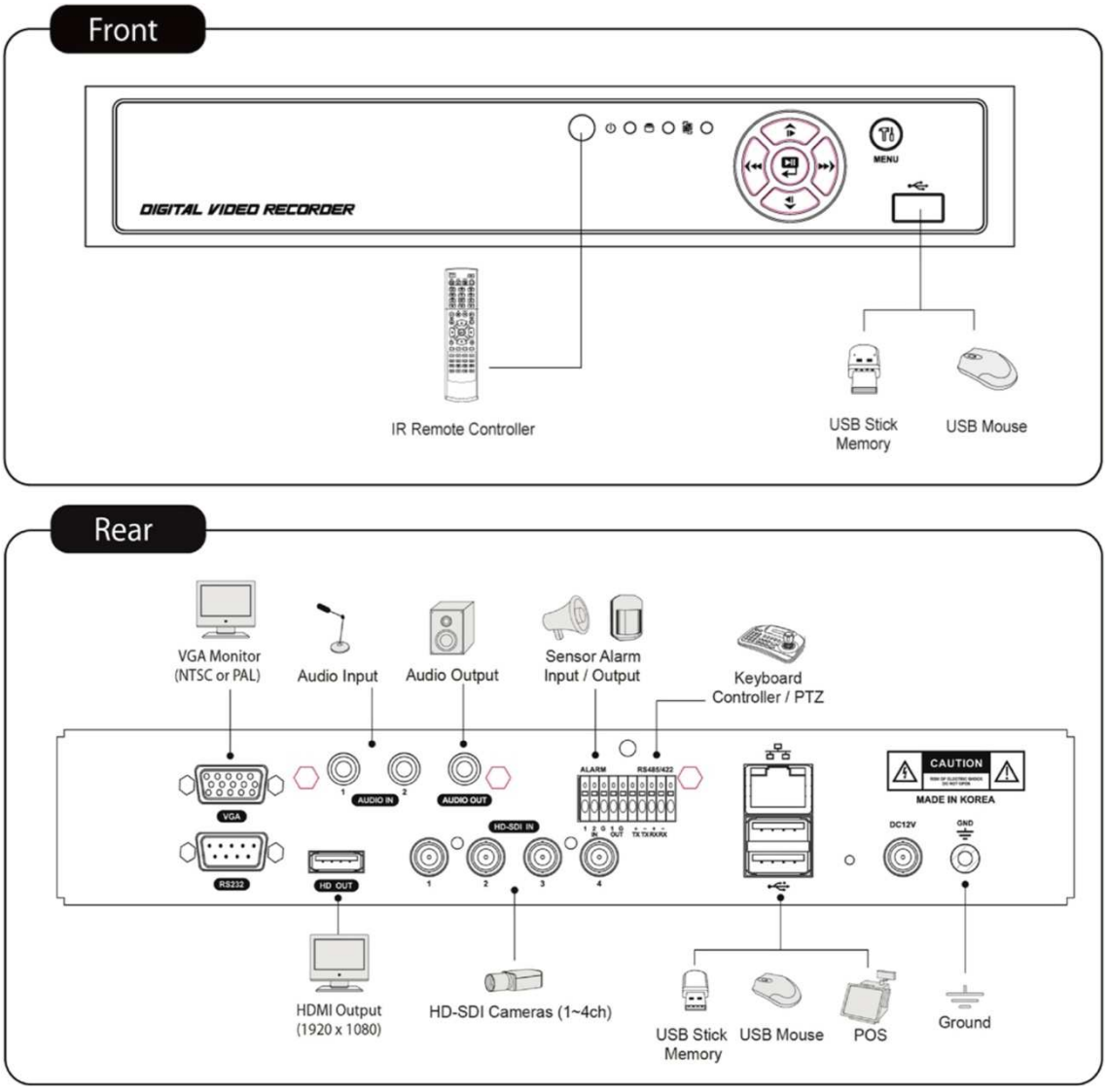
- This equipment is an electronic appliance, so it should be handled with special care.
- After unpacking, please check if all the following items are included.
  - DVR Main body
  - **Ness IQ-SDI-4 (Known in this manual as Type A)**: Power Supply Adapter (DC 12V, 5A) and Power Supply Cable
  - **Ness IQ-SDI-8/16 (Known in this manual as Type B)**: Power Supply Cable
  - Remote Control With 2 AAA batteries
  - Installation CD (CMS Software & User's Manual)

1.2 Service

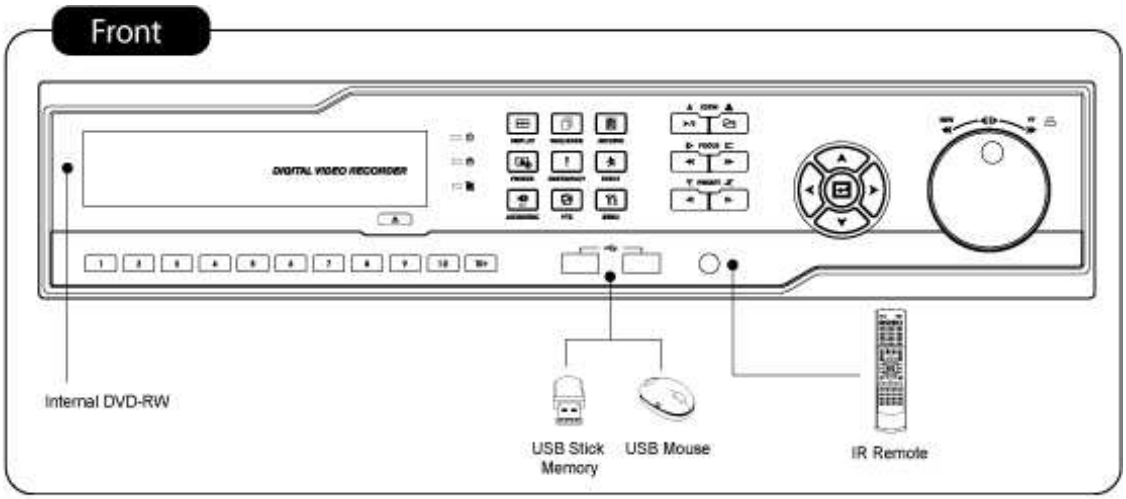
- If there is any problem in the product, please refer servicing to a supplier or a distributor with qualified service personnel.

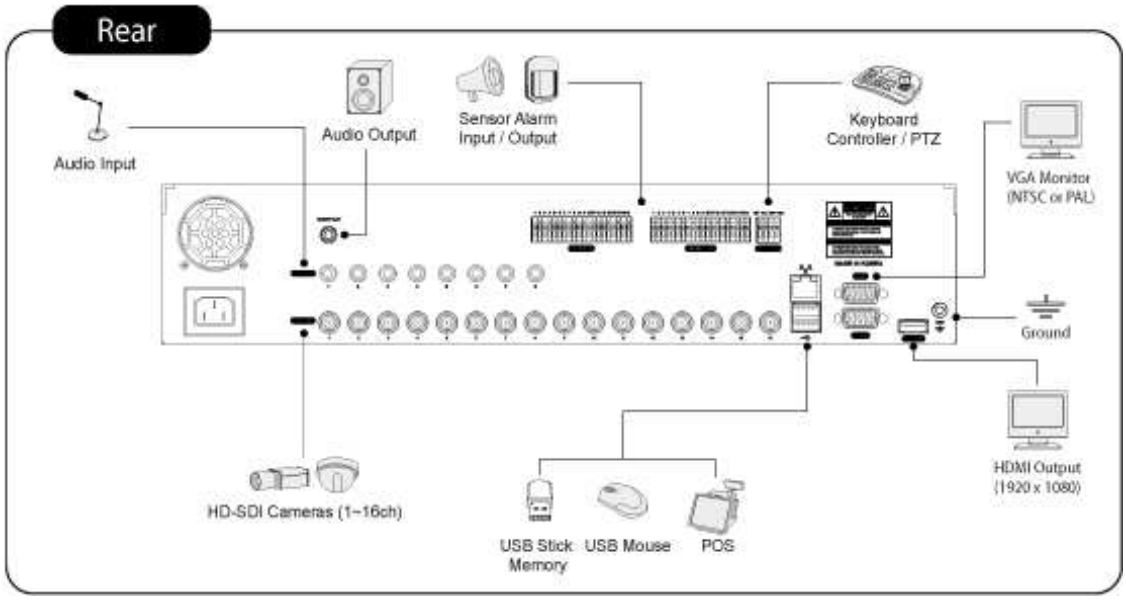
1.3 System Connection Diagram

Ness IQ-SDI-4 (Type A) 4 channel Series DVR



Ness IQ-SDI-8/16 (Type B) 8 / 16 channel Series HD-





2. Installation

2.1 Hard disk and DVD-RW Installation

2.1.1 SATA Port

- **Ness IQ-SDI-4**
  - Main substrate of this DVR has one SATA port: it is indicated as SATA 1.
  - Only one SATA device (hard disk) is possible to connect in Serial to the SATA port.

- **Ness IQ-SDI-8/16**
  - Main substrate of this DVR has five SATA ports: they are indicated as SATA 1, 2, 3, 4 and SATA 5.
  - Please mount DVD-RW at the **SATA port 5.**

Ness IQ-SDI – 4 Mini (Ness Part No. 104-452)

	Storage	SATA 1, 2 Port
4 CH DVR	**HDD**	**1**
	1	HDD

Ness IQ-SDI-4 Std (Ness Part No. 104-453)

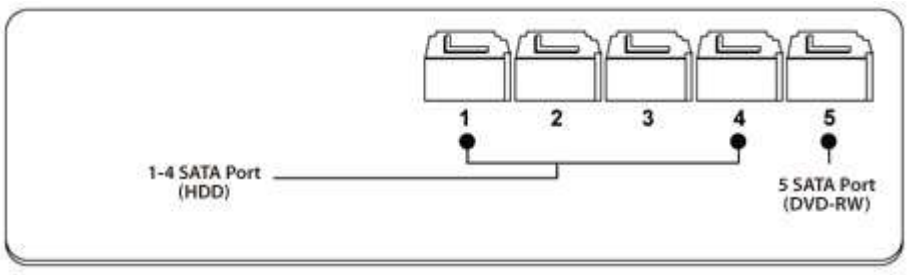
	Storage		SATA 1, 2 Port		SATA 3, 4 Port	
	HDD	**DVD-RW**	**1**	**2**	**3**	**4**
4 CH DVR	1	1	HDD	---	---	DVD-RW
	2	1	HDD	HDD	---	DVD-RW
	3	1	HDD	HDD	HDD	DVD-RW
	4	0	HDD	HDD	HDD	HDD

Ness IS-SDI-8/16 (Ness Part No. 104-451 (8 Channel) and 104-542 (16 channel)

	Storage		SATA 1, 2 Port		SATA 3, 4 Port		SATA 5 Port
	HDD	**DVD-RW**	**1**	**2**	**3**	**4**	**5**
8 / 16 CH DVR	1	1	HDD	---	---	---	DVD-RW
	2	1	HDD	HDD	---	---	DVD-RW
	3	1	HDD	HDD	HDD	---	DVD-RW
	4	1	HDD	HDD	HDD	HDD	DVD-RW
	4	0	HDD	HDD	HDD	HDD	---

2.1.1 Internal SATA Storage

- **Ness IQ-SDI8/16** DVR has 5 internal SATA Ports.
- 1-4 SATA Port: It is designed to mount HDD.
- **5 SATA Port**: Please mount DVD-RW.



2.1.2 HDD Installation

- Securely fix a hard disk by using bracket and screws provided herewith.
- Please do not use any different hard disk cables (data cable and power supply cable) other than ones we provide.
- Otherwise, it may cause damage to the hard disk.

CAUTION

INSTALL HARD DISK AGTER DVR POWER IS OFF. OTHERWISE, IT MAY CAUSE PERMANENT DAMAGE TO THE HARD DISK. TO TURN OFF DVR, PLEASE CLICK (↵) SETUP>SYSTEM>SHUTDOWN. ALSO, WAIT FOR 5 SECONDS BEFORE PLUGGING IN POWER SUPPLY AGAIN.

CAUTION

- FOR INSTALLATION/ADDITION/REPLACEMENT/REMOVAL OF HDD (DVD-RW), MAKE SURE THAT DVR IS TURNED OFF. OTHERWISE, IT MAY CAUSE PERMANENT DAMAGE TO THE HDD (DVD-RW).
- **INSTALLATION/ADDITION/MOVING/REPLACEMENT:** USER SHOULD START 'HDD INITIALIZATION' INCLUDING FORMATTING. OTHERWISE, DVR WON'T RECOGNIZE THE HARD DISK AND MAY BEGIN TO FUNCTION ABNORMALLY. PLEASE FOLLOW THE BELOW PROCEDURE FOR 'HDD INITIALIZATION'.
  - ① (DATE/TIME SETUP) SET UP THE CURRENT DATE AND TIME (SETUP>SYSTEM>ADMIN>DATE/TIME)
  - ② (INITIALIZATION OF SYSTEM SETUP) ALL VALUES IN SETUP ARE RESTORED TO FACTORY DEFAULT SETTINGS – (SETUP>SYSTEM>INFORMATION>STATUS>SETUP>DEFAULT)
  - ③ (HDD FORMAT) HDD FORMAT IS DONE BY SETUP>SYSTEM>ADMIN>STORAGE>FORMAT. IF THERE ARE MORE THAN TWO HDDS, EACH MUST BE FORMATTED, SEPARATELY. WHEN THE FORMAT IS COMPLETED, DVR WILL AUTO-REBOOT.
- **REMOVAL:** FOLLOW THE REMOVE PROCEDURE EVEN WHEN A PRE-INSTALLED HARD DISK HAS BEEN REMOVED. IN – SETUP>SYSTEM>ADMIN>STORAGE>FORMAT, CLICK (↵) 'REMOVED' ITEM UNDER THE DISCRETE FORMAT HEADINGS OF A CORRESPONDING HDD TO DISCARD 'HDD' ITEM. WHEN THE REMOVE PROCEDURE IS COMPLETED, DVR WILL AUTO-REBOOT.

2.1.3 Maximum HDD Capacity

- Each model has a different HDD capacity recognition.
- Below table shows the recommended maximum HDD capacity for each model.

Model	A Type	B Type	C Type	D Type	E Type
Capacity	3TB	16TB	16TB	16TB	16TB

2.1.4 DVD-RW installation

- Securely fix DVD-RW by using bracket and screws provided herewith.
- Please do not use any different DVD-RW cables (data cable and power supply cable) other than the ones we provide.
- Otherwise, it may cause damage to the DVD-RW.
- Only one DVD-RW can be used. Mount it at the SATA 4 port **(B (4CH), C, D** and **E type)**.
- For **B (8/16CH) type**, users should mount it at the **SATA 5 port**.

CAUTION

INSTALL DVD-RW OR/AND HARD DISK AFTER DVR POWER OFF. OTHERWISE, IT MAY CAUSE PERMANENT DAMAGE TO THE HARD DISK. TO TURN OFF DVR, PLEASE CLICK (↵) SETUP>SYSTEM>SHUTDOWN. ALSO, WAIT FOR 5 SECONDS BEFORE PLUGGING IN POWER SUPPLY AGAIN.

2.2 Connector Wiring

2.2.1 Video-In/Loop Out Connections

• Connect cameras to '**HD-SDI IN**' to channel 1 to 16.
•

2.2.2 HD-SDI Camera Input Format

• HD-SDI recorder shall recognize following HD-SDI signals
  – 720P 24, 720P 25, 720P 30, 720P 50, 720P 60, 1080I 50, 1080I 60, 1080P 24, 1080P 25, 1080P 30, 1080P 50 and 1080P 60.

2.2.3 HD-SDI Input Signal detection

Ness IQ-SDI 8/16

• These type of DVRs will automatically detect the input signals from 720P 24, 720P 25, 720P 30, 720P 50, 720P 60, 1080I 50, 1080I 60, 1080P 24, 1080P 25, 1080P 30, 1080P 50, 1080P 60 (Auto Detection) when the system starts.
• 720P and 1080P HD-SDI inputs can be used simultaneously without any restriction on different channel.
• 1080I input cannot be used simultaneously with 720P and/or 1080P.

CAUTION
WHEN 1080I IS CONNECTED TO DVR, DIGITAL ZOOM IS NOT SUPPORTED ON THE LIVE SCREEN.

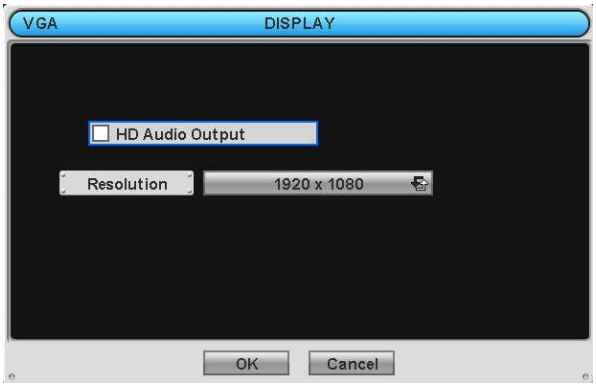
2.2.4 Monitor Connections (Video Out, VGA, HDMI and Spot)

Ness IQ-SDI 8/16

• Use computer monitor. Connect the computer monitor to '**VGA**' or **'HDMI'**, respectively.

2.2.5 HDMI connections

• Connect HDMI cable to HD out port of rear panel and HDMI port of HD output device.
• Please click (↵) SETUP> DISPLAY> VGA and the following screen will appear.



• If user wishes to hear audio via HDMI cable, check the box HD Audio Output
• Click the box below to select resolution.
  – User can select the resolution among '1920x1080 RB', '1920x1080', **'**1920x1080 30p', '1680x1050 RB', '1680x1050', '1280x1024', and '1024x768'
  – The default setting of DVR is '1280 x 1024'.

CAUTION
HDMI connection may not be compatible with certain output device.
Video noise may occur depending on the type of HDMI cable used. Make sure to use an HDMI-certified cable.

2.2.6 Audio Connections

• Connect an audio device to '**AUDIO IN**' and a speaker system to '**AUDIO OUT**'. Please use a speaker system with volume adjustable.

2.2.7 TCP/IP(Ethernet) Connections

- Connect to '**ETHERNET**' connector with the LAN cable.
- When connect to Internet, use an ordinary LAN cable (Non-cross cable). However, when connect directly to a PC, please use only 'Crossover cable'.

2.2.8 Alarm Connections

- Connect Alarm Input (Sensor) to '**AI 1~AI 2** (**or AI 16**)' connectors and connect Sensor Common to '**G**' connector.
- Connect Alarm Output (buzzer, siren, etc.) to '**AO 1~AO 2** (**or AI 16**)' connectors and connect Common to '**G**' connector.
- Connect Pan/Tilt receiver (or Pan/Tilt camera) to '**RS-485/422**' connector. Please observe proper (+) and (-) polarity.

2.2.9 RS-485/422 Connections

- PTZ Camera connector.
- Please use TX+, TX-, RX+ and RX- terminals.

2.2.10 USB Connections

A Type

- There are up to three identical USB ports in front and in rear. It is possible to connect a USB memory stick to archive data or a mouse to control the device.

B Type

- There are up to four identical USB ports in front and in rear. It is possible to connect a USB memory stick to archive data or a mouse to control the device.

2.2.11 RS-232 Connections

- This port is not in use for users. Do not connect any devices through this port.

CAUTION

WHEN USING THE RS232 SERIAL PORT, USERS MUST REQUEST FOR ASSISTANT TO QUALIFIED TECHNICAL PERSON OR SERVICE REPRESENTATIVE.

2.2.12 Grounding (Earthing)

- Connection of ground wire is highly recommended to protect the DVR from external electric shock, such as lightening, electrical surge.

2.2.13 Factory Reset Switch

- Reset the switch to restore all setup values of menus to factory default settings. It is also possible to use to initialize System Log file.
- The switch is located in a pin hole of the back panel.
- Put the clip pin into the switch hole on the monitor (Live) screen and keep pressing until the switch has clicked.

CAUTION

PRESS FACTORY RESET SWICH ONLY IN LIVE MODE **NEVER** PRESS IN SETUP MODE.

2.2.14 Power Supply connections

Ness IQ-SDI 4

: Plug the power supply adapter **(DC 12V, 5A)** which include in this product to '**DC12V**' connector and plug another side to power source. Adapter input voltage is a free volt (100 VAC ~ 240 VAC). Please do not use any different power supply adapter because it may cause the DVR to malfunction.

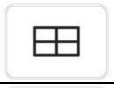
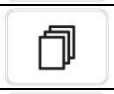
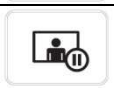
- Ness IQ-SDI 8/16
- : Plug the power supply adapter **(DC 12V, 6.67A)** which include in this product to '**DC12V**' connector and plug another side to power source. Adapter input voltage is a free volt (100 VAC ~ 240 VAC). Please do not use any different power supply adapter because it may cause the DVR to malfunction.
- AC powered DVR: Plug the power supply cable into the power supply (the wall socket). Input voltage is a free volt (100 VAC ~ 240 VAC).

2.2.15 Connections Guideline

- **Video Out Connector:** If only the monitor is connected to VIDEO OUT connector, please set the impedance switch on the rear side of the monitor to 75 ohms to prevent abnormally bright or collapsed images. If wish to connect another device (e.g., a recorder) to the back of the monitor, please set the impedance switch on the rear side of the monitor to HIGH Z (High Impedance) and set the last device to 75 ohms.
- **Alarm Input Connector:** Do not input any type of voltage to the AI 1~AI4 (AI 16) connectors.

3. Input Device and Screen Icons

3.1 Key and LEDs

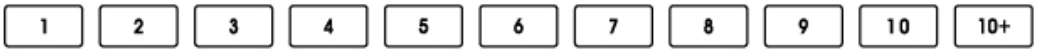
KEYS	PTZ KEY	Operating mode	Setup mode
▲, ▼, ◄, ►		• Control Pan/Tilt rotation of up/down/left/right in PTZ mode	•Up/Down/Left/Right on screen cursor control
1 ~ 16		• Camera select keys : (4/8/16 channel DVR)	
DISPLAY		• Select 1/4/9/16 channel display	
SEQUENCE		• Channel sequence mode on/off (Main Monitor)	
ARCHIVE		• Copy video data into the external storage device	
FREEZE		• Screen freeze mode on/off	
EVENT		• System Log display on/off	
EMERGENCY		• Emergency recording on/off	
PTZ		• Pan/Tilt control mode on/off	
AUDIO/ESC		• Audio on/off (Viewing/Playback) • Select audio channel: Press AUDIO key and then channel key • ESC	
MENU		• Enter the Main Menu (Setup mode)	
REW		• Viewing mode: Instant playback (playback the recorded video from the last one minute) • Playback mode: 1X PLAY/PAUSE • Zoom-Out on PTZ mode	
BACKWARD		• Video search mode on/off • Zoom-In on PTZ mode	
PLAY/PAUSE		• Fast backward playback (changes up to x128 with each press) • Focus Near in PTZ mode	
FORWARD		• Fast forward playback (changes up to x128 with each press) • Focus Far in PTZ mode	
FF		• Frame backward playback • Save Preset in PTZ mode	
SEARCH		• Frame forward playback • Go to Preset in PTZ mode	
Power LED (Red)		• Light off: DVR off • Light on: DVR on	
HDD LED (Green)		• Light off: Stop recording • Blink : Recording/Playback modes (HDD Access), Archive in operation	
Network LED (Yellow)		• Light off: failed to connect to Ethernet • Blink: Connected to Ethernet	

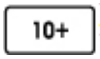
NOTE

A Type has a Menu key and direction keys in the front.

3.2 Camera Select Keys for 16 Channel DVR

Ness IQ-SDI 8/16



- Below shows how to select camera channel for 8/16channel DVR
- Type has a Menu key and direction keys in the front. Below shows how to select camera channel for 8 channel DVR
  - Select Camera No. 1~8
- Below shows how to select camera channel for 16hannel DVR
  - Select Camera No. 1~16: press 

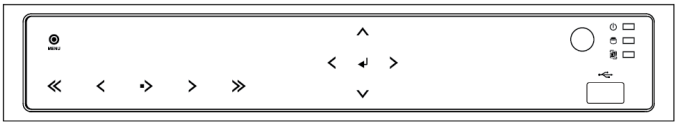
 key and use **1~6** direction key

NOTE

A Type no camera select button at front. Please use an ir remote control or mouse to control the channels.

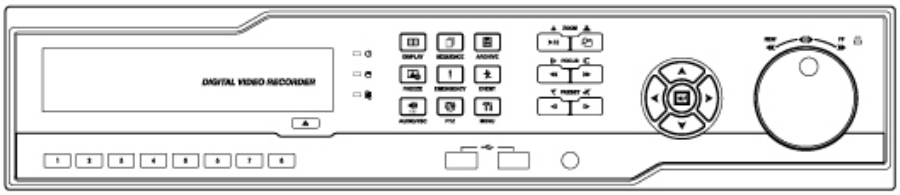
3.3 Front Panel

Ness IQ-SDI 4

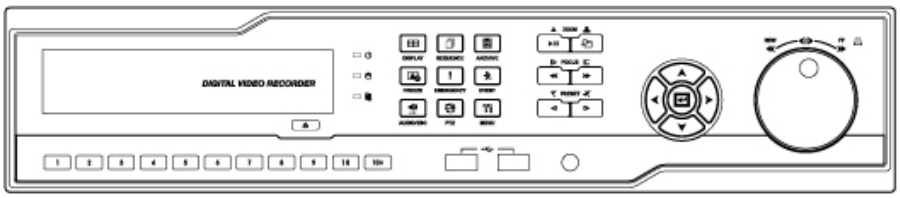


4 Channel DVR

Ness IQ-SDI 8/16



8 Channel DVR



16 Channel DVR

3.4 Using an IR Remote Control

- Usage of a remote controller is same as the front panel keys.
- Follow the procedure below when using the remote controller for multi DVRs.

① Check System ID (e.g., between 1 and 255) of the DVR that wish to use.
- (SETUP>SYSTEM>Information>Status>System ID).

② Holding up the remote controller to face towards the DVR and press the System ID numbers one by one, while pressing ID button on the remote controller. Note that the System ID is a **3-digit number**. Button '**10**' functions the same as '0'.
- (e.g.: If System ID is 3, press **10**>**10**>**3** buttons in sequence while pressing the ID button)

3.5 Using a Mouse

- Mouse provides an easier access to adjustment. Refer to below for proper use.
- Left mouse button functions the same as **Enter** (↵) key on the front panel of DVR.
- Right mouse button displays the following “Function keys” on screen.
- Click Search menu at “Function Keys” the same as **Search** key on the front panel of DVR. Press the button, then the Search menu will appear on screen.

Ness IQ-SDI-4

Name of Key	Function	Name of Key	Function
Display	Change display mode	**Event**	Display System Log
Sequence	Display each channel sequentially	**Search**	Enter Search Mode
Spot	Use spot monitor	**Setup**	Enter Setup
Freeze	Freeze on live/recorded display	**Emergency**	Activate Emergency record
PIP	Picture in Picture function	**Shutdown**	Pre-step before Power off (SETUP>SYSTEM>Shutdown)
PTZ	En/Disable PTZ control	**Cancel**	Cancel Function key menu

Ness IQ-SDI-8/16

Name of Key	Function	Name of Key	Function
Display	Same as front key	**Event**	Same as front key (indicate System Log)
Sequence	Same as front key	**Search**	One-touch playback (same function with (**PLAY/PAUSE**)
Spot	Same as front key	**Setup**	Same as front key
Freeze	Same as front key	**Emergency**	Same as front key
PIP	Same as front key	**Shutdown**	Pre-step before Power off (SETUP>SYSTEM>Shutdown)
PTZ	Same as front key	**Cancel**	Cancel Function key menu

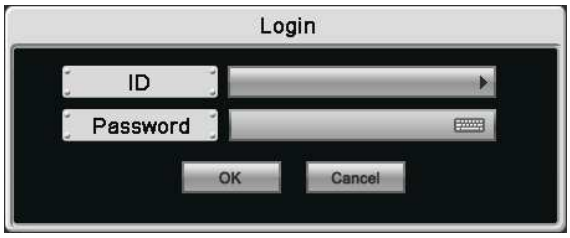
3.6 Screen Icon

Icon	Description	Icon	Description
	Continuous recording mode		In Audio recording
	Event recording mode (Alarm In/Motion)		CMS access indication/ No. of accesses (up to 16)
	In recording		In channel sequencing
	PTZ registration / PTZ mode		Lock
	Remote Controller		Setup in HDD Overwrite mode
	Setup in HDD No Overwrite mode (HDD Full)		Setup in HDD No Overwrite mode (recording)

4. Setup

4.1 Login / Logout

- At the default setting of DVR, user has to input the password to enter the set up menu.
- Please press SETUP key to enter the setup menu and the following screen will appear.



- In order to use all functions and privileges, log in as ID: admin.
- Default Password is “1111”.
- At Setup>System>Account, Administrator should set a user rights depending on each user separately in “Login Settings”.
- After login successfully, following screen will appear.

- Recording continues during setup.
- Main menu consists of 5 sub menus.
  - (**SYSTEM / DISPLAY / DEVICES / RECORD / LINK**)
- There is no factory default in the case of passwords.=> Factory default function cannot be applied to passwords.
- To escape from the setup menu, please click (↵) SYSTEM>Exit on the screen. Then, the following dialogue box will appear.

- Please choose ‘OK’ to log out.
- User may select the Main menu with ◀, ▶ direction keys or mouse click. Please click (↵) the submenu to choose the one under the Main menu.

NOTE

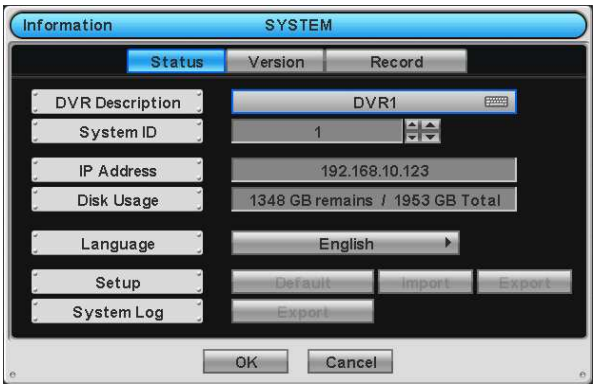
Press **AUDIO/ESC** in the setup screen. It operates alike **CANCEL (ESC).**

It will not operate in the live or playback mode but only in the setup menu.

4.2 SYSTEM

4.2.1 Information

• Please click (↵) SYSTEM>Information and the following screen will appear.



Status

Site Description

• Input the name of DVR.

• Please click (↵) keyboard icon on Site Description frame and the following virtual keyboard will appear.

• Please click (↵) desired letters (characters) on the virtual keyboard to input.

• Use to erase one character every time.

• Use to erase the whole sentence.

• Please choose 'OK' to confirm the input and choose 'Cancel' to cancel.

System ID

• Control DVRs by one remote controller by setting DVR IDs.

• Please click (↵) ▲, ▼ direction keys on the right-hand side of the System ID frame to set the ID of DVR. Take any whole number **between 1 and 255**.

• While pressing (+) or (-) button, the System ID value increases or decreases by 10 units.

Language

• Please click (↵) Language frame to choose desired language and press (↵) key again.

Setup

• **Default:** Click (↵) Default frame to restore all setup values of menus to factory default settings. Please note that System Log is not initialized.

NOTE

This has a different function from Factory Reset Switch on the back panel of DVR in that System Log is not initialized.

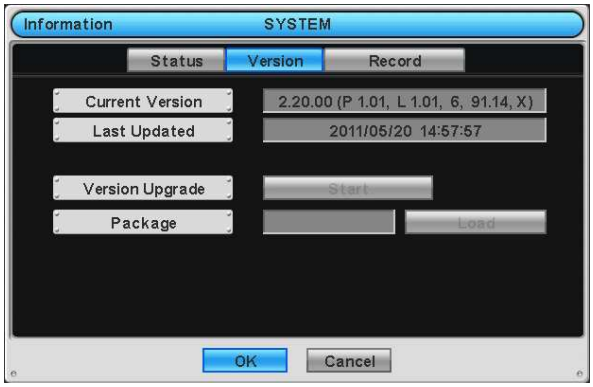
- **Import:** Copy the Menu setup stored in USB memory stick into DVR. Please plug in the memory stick and then click (↵) Import.
- **Export:** Store the Menu setup of DVR in USB memory stick. Please plug in the memory stick and then click (↵) Export.
- When user is on Default, Import or Export process, a message box will ask the progress and click the confirmation icon, then a message box will show whether its success or failure.

System Log

- **Export:** Store the System Log contents in USB memory stick. Please plug in the memory stick and then click (↵) Export.
- When user is on Default, Import or Export process, a message box will ask the progress and click the confirmation icon, then a message box will show its success or failure.

Version

- When user complete Status data input, please click (↵) Version and the following screen will appear.



Version Upgrade

- User may upgrade DVR software.
- Please follow the Upgrade procedure below.
  ① Plug USB memory stick having upgrade file into DVR.
  ② Click (↵) Load frame. Then, software version stored in the USB will appear on the left-hand side.
  ③ Click (↵) Start frame to start the upgrade.
  ④ When the upgrade is completed, a dialogue box pops up. Please choose ‘OK’ and DVR will auto-reboot.

CAUTION

DO NOT UPGRADE UNTIL INSTALL A HARD DISK DRIVE. MAKE SURE TO UPGRADE WHEN HDD IS IN PROPER OPERATION.

CAUTION

PLUGGING OUT USB DEVICE OR FORCED POWER-OFF MAY CAUSE PERMANENT DAMAGE.

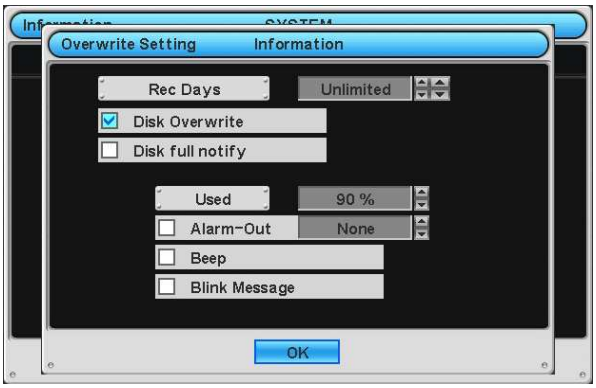
Record

- When user completes Version input, please click (↵) Record. Then, the following screen will appear.

• The screen shows start time and end time of recorded data.

Overwrite Setting

• Click (↵) Overwrite Setting button and the following screen will appear.



• User shall designate the total recording days from 1 day to 30 days and unlimited.
• User may set for beeping or notifying messages that notify the used percentage of disk.
• Check Disk Overwrite and user may activate the overwrite function.
  – This function makes restart the recording from the beginning when the HDD is full. The previous recorded data will be erased from the first one. Following icon will display in bottom of live mode. .
  ① Uncheck (☐) Disk Overwrite, recording will stop automatically when the HDD is full.
  ② At no Overwrite mode, icon will appear when HDD capacity is full that indicates the recording has stopped and, icon will appear while the recording is going on.
  ③ If user changes this setting, the warning message will appear. Then click (↵) “confirmation” button and user may change the setting.
• If user checks (☑) Disk full notify item, the warning message will appear as the used amount of disk.
  ① **Used**
  – User may set the certain value of HDD usage for notification. It will notify at that point. The values are from 50 ~ 100%.
  ② **Alarm-Out**
  – The Alarm-out will happen at the used amount of HDD which is specified at Used.
  ③ **Beep**
  – Check (☑), the warning sound will happen at the used amount of HDD which is specified at Used.
  ④ **Blink Message**
  – Check (☑), the warning message “Disk Used(xx%)!” will appear on the OSD.

CAUTION IF USER USES “Rec Days” FUNCTION, DVR WILL STORE ONLY THE DAYS THAT SPECIFIED BY USER. PLEASE BEWARE OF DATA LOSS DUE TO “Rec Days” FUNCTION.
NOTE Notify setting does not affect saving the recorded data. It only gives notification and keep recording until hard disk is full.
NOTE For more specific setting about Alarm-out, use Setup>DEVICES>Alarm Out.

Clear All Data

• Use to delete or purge all normal recorded data from database. Please follow the procedure below.
  ① Click (↵) Clear All Data frame.
  ② When a dialogue box asking “Remove All Data?” shows, choose ‘OK’.
  ③ Then, Progress window will appear and the process starts.

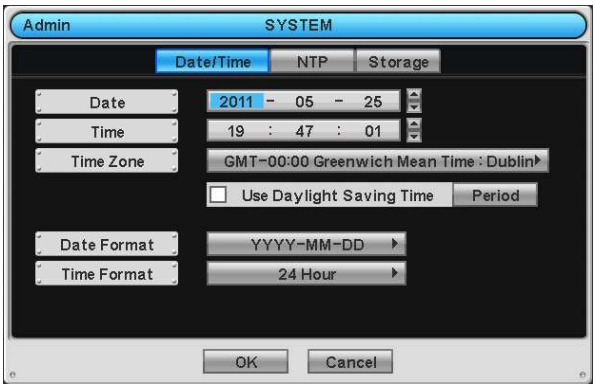
④ When all data are deleted, a dialogue box asking “Are you sure to remove log?” will pop up.
⑤ Choose ‘OK’ to delete all the recorded data as well as System Log.

• When user finished all the necessary inputs to SYSTEM menu, please click (↵) ‘OK’ on the bottom to go back to SETUP screen.

NOTE
This might take a while to completely delete all data, and DVR will reboot after the data is cleared.

4.2.2 Admin

• Please click (↵) SYSTEM>Admin and the following screen will appear.



Date / Time

Date

• This menu will allow user to adjust the settings.
• Please follow the procedure below for time adjustment.
① Click (↵) items (Y, M, D) to change. A designated item will be highlighted in a box (Y: Year, M: Month and D: Date).
② Adjust the number by clicking (↵) ▲, ▼ buttons on the right-hand side.
③ Repeat the same procedure to change Y, M and D.

Time

• This menu will allow user to adjust the current time. The adjustment procedure is same as of Date.

CAUTION
IF ADJUSTED DATE/TIME IS PRIOR TO RECORDED DATA, DATA AFTER NEW DATE/TIME MAY BE ERASED.

CAUTION
ANY CHANGE IN DATE/TIME IS IMMEDIATELY APPLIED ON VIEWING SCREEN (LIVE), BUT THE DATE/TIME WHEN THE RECORDING WAS DONE IS NOT CHANGED. MAKE SURE TO REBOOT DVR AFTER CHANGING THE DATE/TIME. DO NOT FORGET TO EXECUTE SHUTDOWN (SYSTEM>Shutdown) BEFORE REBOOT.

Time Zone

• Please click (↵) Time Zone frame to see the list of nations and choose one.
• Click (↵) a check box next to Use Daylight Saving Time. When user dwells in a region of DST area, please check it (i.e. ☑).
• If DST is observed, please click (↵) Period and the following screen will appear.

- Adjust the dates of beginning (Begin) and end (End) of DST by 'Month/Week/Weekday'.
- Click (↵) the numbers in 'Month/Week/Weekday' for adjustment.
- Choose 'OK' to confirm the setting.

Date Format

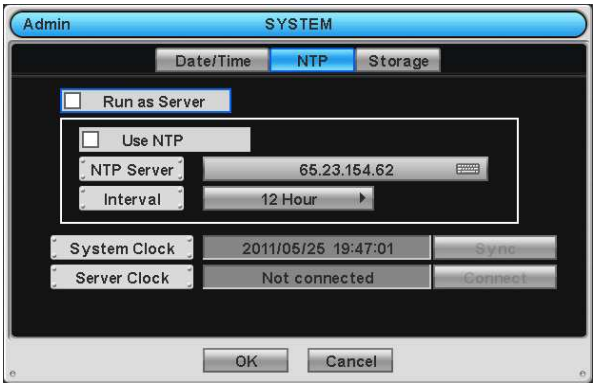
- Set date indication format. Please click (↵) Date Format frame to select a format from the list.

Time Format

- Set time indication format. Please click (↵) Time Format frame to select a format from the list.

NTP

- When user complete Date/Time input, please click (↵) NTP and the following screen will appear.



- This menu is for accurate setting of time of day clock in DVR.
- User may check ☑ only one of Run as Server and Use NTP.
  - **Run as Server:** NTP cannot be used in a non-networked environment (Intranet environment). In this case, DVR with Run as Server functions as Time Server.
  - **Use NTP:** Connect to Internet to synchronize DVR clock with Network Time Server's clock.
- When user completes NTP input, please click (↵) to save the setup.

NTP Server

- Click (↵) keyboard icon in NTP Server frame and the virtual keyboard will appear. Input IP address of NTP server.

NOTE

"Use NTP" function connected to the Time zone, user should set the Time zone correctly to operate the NTP function properly.

NOTE

Currently used NTP is administered by pool.ntp.org and its IP address is 65.23.154.62. However, users are allowed to use IP address of any NTP site.

Interval

- Set clock-update-interval from NTP Server. Normally, user can adjust 1 hour up to 24 hours.

System Clock

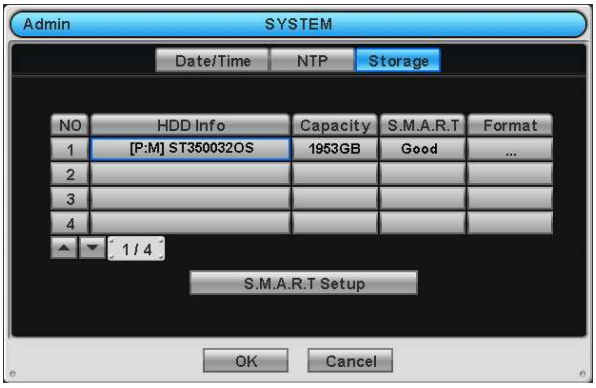
- Display DVR clock.

Server Clock

- Display NTP Server's clock if Internet is connected to Server Clock. If not displaying, please click (↵) Connect button.
- When Server Clock is displayed, please click (↵) Sync button to synchronize NTP Server's clock with DVR clock.
- Choose 'OK' to confirm the clock synchronization.

Storage

- When user completes NTP input, please click (↵) save and the following screen will appear.
- Set S.M.A.R.T. (Self-Monitoring Analysis and Reporting Technology) function for HDD format and auto-display of HDD information. DVD-RW is not shown here.



- Clicking Up and Down button for checking up the status of HDD and DVD-RW devices.
- Using E-SATA port will allow users to connect up to maximum 12 HDD +1 DVD-RW.
- When user installs full storage device and DVD-RW including two e-SATA storage, then following procedures will be listed as below:
  - 1. Internal SATA 1~4 Ports
  - 2. External SATA 1
  - 3. External SATA 2
  - 4. Internal SATA 5 Port
  - 5. DVD-RW

Format

- User must format when:
  - install new HDD
  - add another HDD
  - replace HDD
  - move HDD (change installation port)
  - remove HDD
- Click (↵) Add/Remove frame in Format column and choose 'OK' on the dialogue box to start formatting.
- Following format, DVR will auto-reboot. If there are more than 2 HDDs, please formats each of HDDs. DVR will auto-reboot when all the HDDs are formatted.
- If the format changes to '---'after reboot, it means formatting has been properly done.

CAUTION

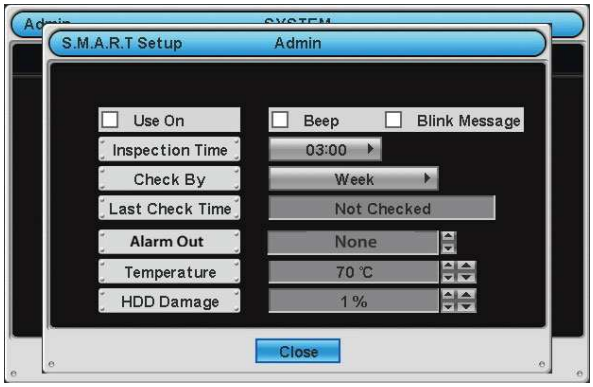
EXECUTE REMOVE PROCEDURE EVEN WHEN USER REMOVE PREVIOUSLY INSTALLED HDD. THE REMOVE PROCEDURE IS THE SAME AS THE FORMAT PROCEDURE DESCRIBED ABOVE.

S.M.A.R.T

- Click the frame on S.M.A.R.T column and temperature and HDD damage will show.

S.M.A.R.T Setup

• Please click (↵) S.M.A.R.T Setup and the following screen will appear.



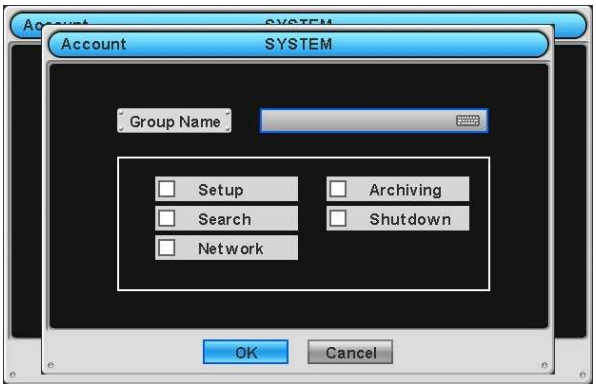
• Check the square box ☑ next to Use On. Through S.M.A.R.T function, make alarm message, indicating HDD damage, will show.
• Check ☑ Beep; it will give the alarm sound, indicating HDD damage, as the SMART setup.
• Check ☑ Blink Message, the alarm message will blink on the OSD, as the SMART setup.
• If "Use on" box is unchecked, Beep, Blink Message will be unchecked automatically. Only when "Use on" is checked☑, user can set Beep, Blink Message function.
• Click (↵) Inspection Time frame to set inspection time.
• Click Check by frame to select inspection interval.
• Last Check Time: show the time of the last inspection.
• Check ☑ Alarm out : user can set the alarm out, when S.M.A.R.T function detects Abnormal symptoms from HDD.
• Duration of alarm out operating time can adjust on DEVICES>Alarm Out setup section (please refer 4.4.5).
• Clicking (↵) ▲, ▼ direction buttons on the right-hand of alarm-out frame to select the device for alarm out.
• Click (↵) ▲, ▼ direction buttons on the right-hand side of Temperature frame to adjust to maximum temperature for the HDD used in DVR. In general, it is **55℃.**
• Click (↵) ▲, ▼ direction buttons on the right-hand side of HDD Damage frame to set the permissible level of HDD damage (%). HDD is a very crucial element for DVR recording, so set the permissible level within 1% to 2% to assure maximum safety.
  – While pressing (+) or (-) button on the rightmost side of Temperature or HDD Damage item, a target value increases or decreases by 10 units.
• Choose 'OK' to confirm the setting.

4.2.3 Account

• Please click (↵) SYSTEM>Account and the following screen will appear.

New Group

• Please click (↵) New Group and the following screen will appear.



- Click (↵) keyboard icon on the right-hand side of Group Name frame. Then, the virtual keyboard will show. Please click (↵) desired characters (up to 8 characteristics) on the virtual keyboard.
- Do provisioning for Group Name by selectively checking ☑ some of the following items (Setup, Search, Network, Archiving and Shut Down).
- Choose 'OK' to confirm the setting.

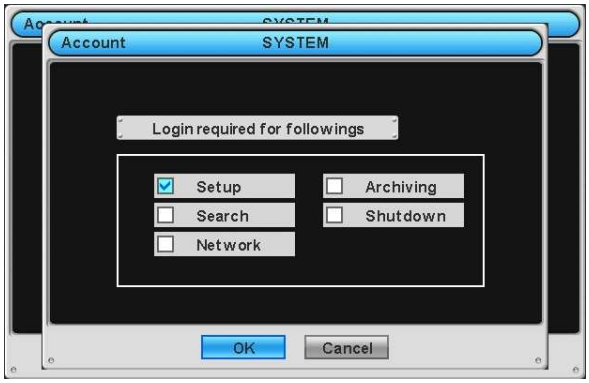
Login Setting

- Please click (↵) Login Settings and the following screen will appear.
- Selectively enable password protection for important operations (Setup, Search, Network, Archiving and Shut Down).
- Please check ☑ the operations that wish to enable password protection.

CAUTION

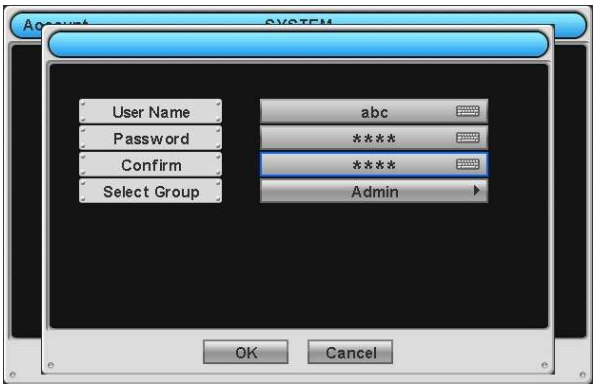
USER WILL NOT BE ASKED TO ENTER YOUR PASSWORD FOR OPERATION(S) WHERE PASSWORD PROTECTION IS NOT ENABLED.

- Choose 'OK' to confirm the setting.



New User

- Please click (↵) New User and the following screen will appear.
- Click (↵) keyboard icon on the right-hand side of User Name frame and the virtual keyboard will appear. Click desired characteristics (up to 8 characteristics) on the virtual keyboard.
- Input Password and Confirm.



• Choose ‘OK’ to confirm the setting. Then, lists of Group and User will show as follows.

• Click (↵) ☒ to delete the set Group or User.
• User may create up to 8 Groups and 8 Users.
• Choose ‘OK’ to confirm the setting.

Password Resetting

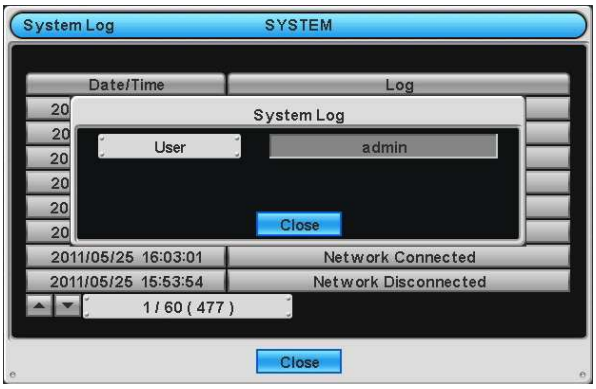
• Click ID on User column. The following screen will appear.

• This is a screen for password resetting.
• Input password by clicking the keyboard icon on the right-hand side of the frame.

• Use key if wish to erase password on keyboard.

4.2.4 System Log

• Please click (↵) SYSTEM>System Log and the following screen will appear.



• System Log displays diverse events as below events by specifying the user account that actually has accessed the DVR.
  - Setup (Menu) Enter/Exit
  - Playback Mode Enter/Exit
  - Network Access Enter/Exit
  - Archive Success/Fail
  - System Start/shut down
  - S.M.A.R.T. Check
  - NTP Sync/ Server Success/Fail
  - Send E-mail Success/Fail
  - HDD Format Success/Fail
  - Data clear Success/Fail
  - USB Upgrade Success/Fail
  - DVR Setup Change by Remote
  - Before/After Time Adjust
• System Log removal procedure is as follows:
  - Execute Clear All Data in SYSTEM>Information>Record and choose ‘OK’ on the popup dialogue box. Please note that all normal recorded video data are deleted from database.
  - Press Factory Reset Switch on the back panel. Please note that the entire menu setup is also defaulted.

4.2.5 Exit

• Please click (↵) SYSTEM>Exit and choose ‘OK’ on the popup dialogue box to exit from the setting.

CAUTION

ANY CHANGES MADE IN SETUP ARE APPLIED AFTER EXIT.

4.2.6 Shutdown

- Shutdown is a function to help user safely turn the DVR off. Please use the proper shut down procedure to avoid damaging to our DVR system. Do not remove the power during shut down.

CAUTION

DO NOT TURN DVR OFF WITHOUT USING THE PROPER SHUT DOWN PROCEDURE. OTHERWISE, IT MAY CAUSE DAMAGE TO DVR. ALWAYS REMOVE THE POWER AFTER SHUT DOWN.

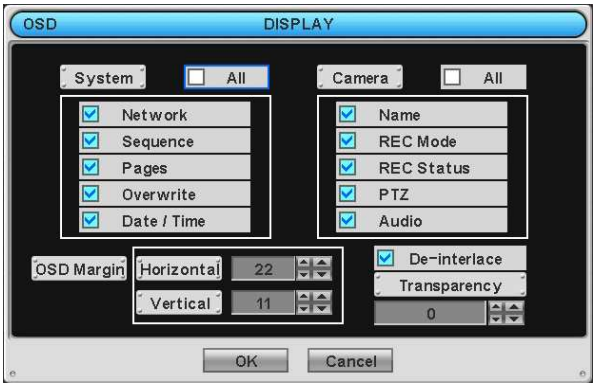
- Click (↵) SYSTEM>Shutdown and then choose 'OK' on the dialogue box to confirm.
- When user select Shutdown menu, the OSD menu on the screen disappears.
- Reboot the DVR after Shutdown. Turn off the DVR and wait for 5 seconds before restart.

4.3 DISPLAY

- Please click (↵) DISPLAY and the following screen will appear.

4.3.1 OSD

- Please click (↵) DISPLAY>OSD and the following screen will appear.



- The OSD menu will allow user to configure full features (i.e., on/off every letter and icon) displayed on the screen.
- Letters and icons are divided under System and Camera categories. If click (↵) 'All', all items are on/off at once.

OSD Margin

- The OSD Margin menu will allow user to adjust the position of OSD (letters) on the monitor. Use it when some of letters are

dropped out and invisible on the monitor.

- Adjust Horizontal to change margin between both ends of the monitor on horizontal side and OSD. Margin range is between **0 and 50**, with a larger number representing greater margin.
- Adjust Vertical to change margin between both ends of the monitor on vert 130.
- Vertical side and OSD Margin range is between **0 and 50**, with a larger number representing greater margin.
- While pressing (+) or (-) button, a target value increases or decreases by 10 units.

De-Interlace

- This function changes playback display into Progressive Scan or Interlace Scan. Check (☑) De-Interlace, then frame will display as the Progressive Scan and shows the better picture quality.

4.3.2 Main Monitor

- Please click (↵) DISPLAY>Main Monitor and the following screen will appear.

- The Main Monitor menu will allow user to adjust channel sequencing interval of Main monitor.

Full Seq

- Adjust interval for 'Full screen sequencing'.
- Check ☑ check box next to the camera that wish to include in sequencing. Any camera with unchecked check box will be excluded from channel sequencing.
- Adjust the rotation interval of camera by clicking Dwell column. The rotation interval changes to **3>5>10>15>30>60 seconds** by each press.

Quad Seq

- Use only with 8 / 16 channel DVRs.
- Adjust interval for 'X4 Split Screen sequencing'.
- Check ☑ check box next to the camera that wish to include in sequencing. Any camera with unchecked check box will be excluded from channel sequencing.
- Adjust the rotation interval of camera by clicking Dwell column. The rotation interval changes to **3>5>10>15>30>60 seconds** by each press.
- '4 Split Screen sequencing' is disabled in the following modes.
  - **8 channel DVR:** 3x3 Mode
  - **16 channel DVR:** 4x4 Mode

X9 Seq

- Use only with 16 channel DVR.
- Adjust interval for 'X9 Split Screen sequencing'.
- Check ☑ check box next to the camera that wish to include in sequencing. Any camera with unchecked check box will be excluded from channel sequencing.
- Adjust the rotation interval of camera by clicking Dwell column. The rotation interval changes to **3>5>10>15>30>60 seconds** by each press.
- '9 Split Screen sequencing' is disabled in 4X4 Mode.

4.3.3 VGA

- Users are able to set its video output resolution from 1024x768 to 1920x1080
- If user wishes to hear audio via HDMI cable, check the box HD Audio Output

- HD-SDI DVR displays and records differently with previous NTSC or PAL methods.
- Analog Output will help users to select its video output between NTSC and PAL
- HD-SDI DVR Once it has changed, it will ask to reboot for the new recognition of video out method
- The default value is NTSC

CAUTION

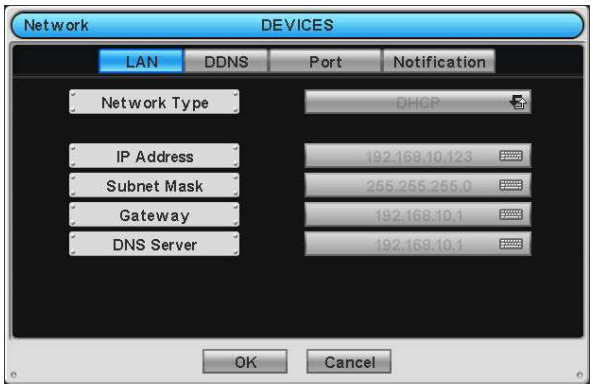
ALTHOUGH USERS TURN ITS SYSTEM SETTING TO DEFAULT, THE ANALOG OUTPUT WILL STAY PREVIOUS OUTPUT METHOD AND NOT EFFECT BY THE DEFAULT SETTING.

4.4 DEVICES

- Please click (↵) DEVICES and the following screen will appear.

4.4.1 Network

- Please click (↵) DEVICES>Network and the following screen will show.



LAN

Network Type

- Please click (↵) Network Type. When you click (↵) the button, it changes alternately to Static (fixed IP) and DHCP (floating IP).
- In Static, user must manually set the static IP address for use.
  - Set IP Address, Subnet Mask and Gateway. Please ask your network administrator for more details.
  - To input address, please click (↵) and execute the keyboard icon on the right-hand side of each frame.
  - In DHCP, IP Address, Subnet Mask, Gateway and DNS Server will have input automatically.

DNS Server

- When user set Network Type to DHCP, DNS server will be inputted automatically.
- When user set Network Type to Static, please click (↵) the keyboard icon on the right-hand side of DNS Server frame and manually input the address.

CAUTION

NOTE THAT DNS SERVER ADDRESS IS IP ADDRESS OF YOUR COMMUNICATIONS COMPANY NAME SERVER PROVIDING INTERNET SERVICE. IT IS NOT THE IP ADDRESS OF DDNS SERVICE SITE.

DDNS

- Please click (↵) DDNS and the following screen will appear.

- ‘Floating IP system’, although being predominantly used over Internet, is very inconvenient for users because its address varies every time when user access. The best alternative is DDNS (Dynamic Domain Naming System) which uses name (domain name) instead of IP address (numbers). DDNS automatically recognizes ever changing, floating IP addresses, so it will allow easy Internet access.
- Dvrdormain.com
  - Check ☑ a checkbox of Dvrdomain.com to use Dvrdomain.com Server.
  - As for DDNS Server, Dvrdomain.com will be showing as default.
  - As for Port, 95 will be shown as default. If ‘95’ is unable, please consult with a product distributor.

- When user press Get Domain Name button, Domain Name and MAC Address value will automatically display after 10 seconds.
- Choose ‘OK’ to confirm the setting.
- 3rd Party
  - Check ☑ a checkbox of 3rd Party to use dyndns.org or no-ip.com Server.
  - As for DDNS Server, dyndns.org will be showing as default. No-ip.com can be selected by clicking the arrow.

  - As for Domain Name, user have to input the Domain Name given from the selected DDNS Server.
  - As for ID and Pass word, use the user ID and Password to log in to the selected DDNS Server.
  - Click “Run ddns service” to start mapping from DVR to DDNS Server.
- Choose ‘OK’ to confirm the setting.

Port

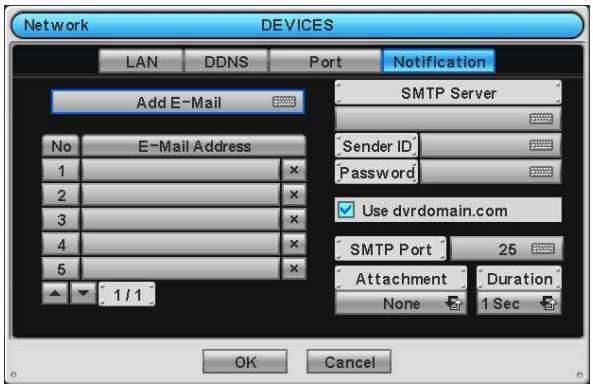
- Please click (↵) Port and the following screen will appear.

- Network Throat is for setting an average transfer speed.
- Please choose the suitable speed according to the users' network environment.
- If users want to use dual streaming, please click on the check box beside the "Enable Dual Streaming". If not, please uncheck the check box.
- There are various network throat controls which users may choose.
  - Ethernet support Max. 1000Mbps.
- Network video transmission speed and quality can be configured by pressing "Frames" and "Quality" buttons as follows.
  - Frames : 1, 2, 3, 4, 5, 7, 15, 30 frames for NTSC (1, 2, 3, 4, 5, 6, 12.5, 25 frames for PAL)
  - Quality : Std. 1, Std. 2, Std. 3, Std. 4 (standard), High 1, High 2, High 3, Super 1, Super 2, Super 3
- The Port Number Setup menu will allow users to set Administrator and Port Number for Video/Audio and Web Port.
- The Port Number Setup menu has two selections of "Register UPNP" or "Unregister UPNP".
- Click (↵) "Register UPNP" for automatic port forwarding.
- Click (↵) "Unregister UPNP" to do port forwarding manually.
- For Port Number Setup, please get an approval of the network administrator in connection with CMS program.
- Port number
  - **Administrator:** 5000~65535
  - **Video / Audio:** 5000~65535
  - **Web:** 1~65535
- Choose 'OK' to confirm the setting.

NOTE If users check the "Enable Dual Streaming" and click "OK" button, DVR will automatically reboot.
CAUTION IT IS NOT ABLE TO CHANGE PORT NUMBER DURING CMS ACCESS TO DVR.
CAUTION CHANGES BEING MADE ARE APPLIED AFTER COMPLETE SETUP TO EXIT.
CAUTION PLEASE CHECK THE ROUTER FOR UPNP SUPPORTABILITY BEFORE START USING THE UPNP FEATURE.
CAUTION ONCE PORT NUMBERS ARE CHANGED, IT MUST BE CHANGED THE PORT NUMBERS OF CMS (Central Monitoring Station) PROGRAM AS WELL.

Notification

- Please click (↵) Notification and the following screen will appear.



- The Notification menu allows sending users the message of the Event occurred in the DVR via E-Mail.
- Click (↵) the keyboard icon on the right-hand side of Add E-Mail frame and the virtual keyboard will appear. Please register E-Mail address. E-Mail address should contain @.
- Click (↵) the keyboard icon on the right-hand side of SMTP Server frame and the virtual keyboard will appear. Please register the SMTP Server. SMTP server can be set up by the users to have own SMTP server on their site.
- Click (↵) the keyboard icon on the right-hand side of Sender ID frame and the virtual keyboard will appear. Please register an ID to the sender mail server (e.g., tony123).
- If users want to use dvrdomain.com which is offered by manufacturer instead of own SMTP server, please click on the check box (use dvrdomain.com).
- Default number of SMPT port is 25. Please note that some particular areas have restriction on the default port. If so, port number 2525 and 587 can be replaceable.
- When an event occurs, users can send an email to a designated mail address by clicking attach button and selecting data to be transmitted. Users may select one of JPEG, VIDEO CLIP and None. In case of transmitting VIDEO CLIP data, set the duration of time for recoded data in duration menu. (e.g. 1 sec, 3 sec, 5 sec).

CAUTION ACCORDING TO THE VARIOUS LOCAL CONDITIONS; SSL EMAIL SERVERS MAY NOT WORK CORRECTLY WITH THIS FUNCTION. IF SO PLEASE INACTIVATE THE SSL FEATURE IN THE SERVER SETUP. NOTE THAT SOME SERVER MAY NOT HAVE THIS INACTIVATE FEATURE
CAUTION DEPENDING ON THE VARIOUS LOCAL CONDITIONS, SOME E-MAIL SERVERES MAY NOT WORK PROPERLY WITH THIS FUNCTION.

4.4.2 Camera / PTZ

• Please click (↵) DEVICES>Camera/PTZ and the following screen will appear.

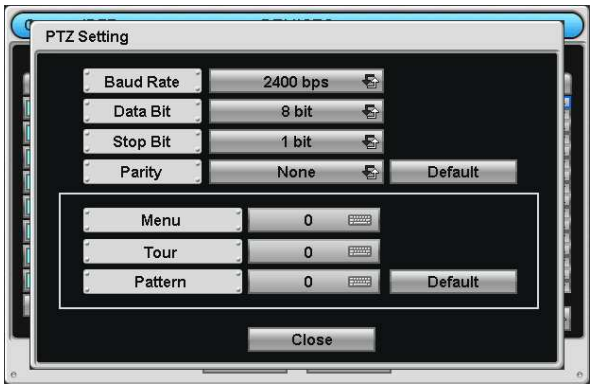
• Click (↵) the keyboard icon on the right-hand side of each frame on Title column and the virtual keyboard will appear. Then, register titles of cameras.

• If a check box is checked ☑on No column, a video of the corresponding camera is recorded and displayed on the monitor. However, if user does not check the checkbox, both recording and monitor display stop. Then, DVR picture, instead of a recorded video, will be displayed on the monitor.

CAUTION

WHEN USER EXCLUDES A CORRESPONDING CAMERA VIDEO FROM RECORDING AND MONITOR DISPLAY (CHECK A CHECK BOX ☐), MAKE SURE CHANNELS OF LARGE NUMBERS ARE EXCLUDED FIRST.

- If a check box is checked ☑ on Covert column, a video is recorded but is not displayed on the monitor.
- Click (↵) each frame on PTZ column to select PTZ protocols connected to a corresponding camera.
- Click (↵) each frame on Set to set PTZ Settings connected to a corresponding camera.



- If users click (**Default**), proper number of selected PTZ will appear automatically. Please choose 'OK' to confirm the setting.
- Menu, Tour and Pattern help user to use OSD function of PTZ camera.
  - PTZ camera itself supports OSD menu, use the setup value to more easily enter and use the OSD menu even in DVR.
  - If OSD enter command is 95 + PSET for example, designate 95 for Menu item,
  - If shortcut key to use Tour function is 71 ~79 + PSET, designate 70 for Tour item and
  - If shortcut key to use Pattern function is 81 ~ 89 + PSET, designate 80 for Pattern item.
  - The setting information herein is used for PAN/TILT control in 5.1.5 (to be described).
  - If click Default, basic setup values are given (i.e., Menu: 95, Tour: 70, Pattern: 80).
  - For further details on setting, please refer to the PTZ camera manual.
- Click (↵) ▲, ▼ direction buttons on the right-hand side of the ID column to set ID number (i.e., **0 ~ 9999**) of each PTZ.
- While pressing (+) or (-) button, ID increases or decreases by 10 units.
- Choose 'OK' to confirm the setting.

4.4.3 Audio

- Please click (↵) DEVICES>Audio and the following screen will appear.

- The Audio menu will allow user to choose whether to record Audio.
- When a check box is marked ☑ on No column, corresponding audio and video are recorded. However, if the check box is

not marked, audio is not recorded.

- If users check on bind to cam, then the audio and video of same channel will come out. If not, the audio of unchecked channel will not come out. In addition, this function will effect on live screen. (The default audio channel is No. 1)
- Choose 'OK' to confirm the setting.

4.4.4 Alarm In

- Please click (↵) DEVICES>Alarm In and the following screen will appear.

- The Alarm In menu will allow user to give title and to select the type of Alarm input.
- Click (↵) the keyboard icon on the right-hand side of each frame on Title column and the virtual keyboard will appear. Then, please register the title of Alarm input.
- When a check box is marked ☑ on No column, a corresponding Alarm starts operating. However, if user does not check the check box, the operation stops.
- Click (↵) each frame on Type column to select type of a corresponding Alarm input.
  - **NO:** contact is normally open (Normally open)
  - **NC:** contact is normally closed (Normally closed)
- User may change the type of all Alarm input at a time by clicking the Type box on the menu tab.
- Choose 'OK' to confirm setting.

4.4.5 Alarm Out

- Please click (↵) DEVICES>Alarm Out and the following screen will appear.
- The Alarm Out menu will allow user to give title and to select the type and duration of Alarm output.

- Click (↵) keyboard icon on the right-hand side of each frame on Title column and the virtual keyboard will appear. Then, please register the title of Alarm output.
- When a check box is marked ☑ on No column, a corresponding Alarm output starts operating. However, if user does not check the check box, the operation stops.
- Click (↵) each frame on Type column to select type of a corresponding Alarm output.
  - **NO:** contact is normally open (Normally open)

- **NC:** contact is normally closed (Normally closed)

• User may change the type and duration of all Alarm output at a time by clicking the Type and Duration box on the menu tab.
• Choose ‘OK’ to confirm setting.

4.4.6 Serial In

NOTE

Please refer to “14 Serial In”.

4.5 RECORD

• Please click (↵) RECORD and the following screen will appear.

4.5.1 Setting

• Please click (↵) RECORD>Settings and the following screen will appear.

• There are three kinds of recording mode.
  - **Continuous:** record continuously.
  - **Event:** record only when Sensor or Motion calls.
  - **Emergency:** record when press **EMERGENCY** key.

Continuous

• The Continuous menu will allow user to set recording mode.
• Each frame on Title column shows camera title registered in DEVICES>Camera/PTZ. User cannot change camera titles here.
• Click (↵) each frame on Resolution column to select recording resolution of a corresponding camera. User may select one of **360x 240(288), 720x240(288), 720x480(576), 1280x720 and 1920x1080**
• Click (↵) each frame on Frames column to select recording rate of a corresponding camera. Recording rate varies by camera. Below lists the maximum recording rate of each camera.

Ness IQ-SDI Model	360x 240(288)	720x240(288)	720x480(576)	1280 x 720	1920 x 1080
4 Channel DVR	Max. 25 fps per Channel	Max. 25 fps per Channel	Max. 25 fps per Channel	Max. 12 fps per Channel	Max. 7 fps per Channel
8 Channel DVR	Max. 25 fps per Channel	Max. 25 fps per Channel	Max. 25 fps per Channel	Max. 12 fps per Channel	Max. 7 fps per Channel
16 Channel DVR	Max. 12 fps per Channel	Max. 12 fps per Channel	Max. 12 fps per Channel	Max. 7 fps per Channel	Max. 7 fps per Channel

• Click (↵) each frame on 'Quality' column to select recording quality of a corresponding camera. User may select its recording quality from **Super, High and Std**.
• Click (↵) each frame on 'Duration' column to select recording duration (i.e., **1 second ~3 hours**) of a corresponding camera.
• User may change the setting values of Resolution, Frames, Quality and Duration at a time by clicking the menu tab.
• Choose 'OK' to confirm the setting.

NOTE The maximum recording frame is varied from different types of HD-SDI signal which can be input in to a DVR
NOTE **The Ness IQ-SDI** DVR will detect 1080i, 1080p or 720p HD-SDI input signals automatically while it is booting. (Auto Detection).
NOTE For 1080i signal input, it cannot be used together with 720p and/or 1080p. Also Live zoom function is not supported.
CAUTION IF USER CONNECTS DIFFERENT TYPES OF HD-SDI SIGNALS WHILE DVR IS OPERATING. IT MAY CAUSE MALFUNCTIONS OF DVR.

Event

• Please click (↵) Event and the following screen will appear.

• The Event menu will allow user to set Event videos.
• Each frame on Title column shows camera title registered in DEVICES>Camera/PTZ. User cannot change camera titles here.
• Click (↵) each frame on Resolution column to select recording resolution of a corresponding camera. User may select one of **360x 240(288), 720x240(288), 720x480(576), 1280x720 and 1920x1080**
• Click (↵) each frame on Frames column to select recording rate of a corresponding camera. Recording rate varies by camera. Below lists the maximum recording rate of each camera.

Ness IQ-SDI Model	360x 240(288)	720x240(288)	720x480(576)	1280 x 720	1920 x 1080
4 Channel DVR	Max. 25 fps per Channel	Max. 25 fps per Channel	Max. 25 fps per Channel	Max. 12 fps per Channel	Max. 7 fps per Channel
8 Channel DVR	Max. 25 fps per Channel	Max. 25 fps per Channel	Max. 25 fps per Channel	Max. 12 fps per Channel	Max. 7 fps per Channel
16 Channel DVR	Max. 12 fps per Channel	Max. 12 fps per Channel	Max. 12 fps per Channel	Max. 7 fps per Channel	Max. 7 fps per Channel

• Click (↵) each frame on 'Quality' column to select recording quality of a corresponding camera. User may select its recording quality from **Super, High and Std**.
• Click (↵) each frame on 'Duration' column to select recording duration (i.e., **1 second ~3 hours**) of a corresponding camera.
• User may change the setting values of Resolution, Frames, Quality and Duration at a time by clicking the menu tab.
• Choose 'OK' to confirm the setting.

NOTE The maximum recording frame is varied from different types of HD-SDI signal which can be input in to a DVR
NOTE **A and B Types** of DVR will detect 1080i, 1080p or 720p HD-SDI input signals automatically while it is booting. (Auto Detection).
NOTE For 1080i signal input, it cannot be used together with 720p and/or 1080p. Also Live zoom function is not supported.
CAUTION IF USER CONNECTS DIFFERENT TYPES OF HD-SDI SIGNALS WHILE DVR IS OPERATING. IT MAY CAUSE MALFUNCTIONS OF DVR.

Emergency

• Please click (↵) Emergency and the following screen will appear Emergency.
• The Emergency menu will allow user to set Emergency videos.
• Each frame on Title column shows camera title registered in DEVICES>Camera/PTZ. User may not change camera titles here.

- Click (↵) each frame on Resolution column to select recording resolution of a corresponding camera. User may select one of **360x 240(288), 720x240(288), 720x480(576), 1280x720 and 1920x1080**
- Click (↵) each frame on Frames column to select recording rate of a corresponding camera. Recording rate varies by camera. Below lists the maximum recording rate of each camera.

Ness IQ-SDI Model	360x 240(288)	720x240(288)	720x480(576)	1280 x 720	1920 x 1080
4 Channel DVR	Max. 25 fps per Channel	Max. 25 fps per Channel	Max. 25 fps per Channel	Max. 12 fps per Channel	Max. 7 fps per Channel
8 Channel DVR	Max. 25 fps per Channel	Max. 25 fps per Channel	Max. 25 fps per Channel	Max. 12 fps per Channel	Max. 7 fps per Channel
16 Channel DVR	Max. 12 fps per Channel	Max. 12 fps per Channel	Max. 12 fps per Channel	Max. 7 fps per Channel	Max. 7 fps per Channel

- Click (↵) each frame on 'Quality' column to select recording quality of a corresponding camera. User may select its recording quality from **Super, High and Std**.
- Click (↵) each frame on 'Duration' column to select recording duration (i.e., **1 second ~3 hours**) of a corresponding camera.
- User may change the setting values of Resolution, Frames, Quality and Duration at a time by clicking the menu tab.
- Choose 'OK' to confirm the setting.

NOTE
The maximum recording frame is varied from different types of HD-SDI signal which can be input in to a DVR

NOTE
A, B Types of DVR will detect 1080i, 1080p or 720p HD-SDI input signals automatically while it is booting. (Auto Detection).

NOTE
For 1080i signal input, it cannot be used together with 720p and/or 1080p. Also Live zoom function is not supported.

CAUTION
IF USER CONNECTS DIFFERENT TYPES OF HD-SDI SIGNALS WHILE DVR IS OPERATING. IT MAY CAUSE MALFUNCTIONS OF DVR.

4.5.2 Schedule

- Please click (↵) RECORD>Schedule.
- Each weekday is composed of 24 'Time blocks'. Each block represent 1 hour.
- Click (↵) Camera frame to select Camera No. 1.
- Please set the recording mode as follows:
  ① Mark a check box the desired recording mode in the schedule (i.e., Continuous, Alarm, Motion and PreAlarm)). If user wants to stop recording, please clear all check boxes.
  ② Click block, row, column or all (square box) to register desired recording mode.
  - Click (↵) a block and only the block will be registered.
  - Click (↵) a row (S~H) and the entire row will be registered.
  - Click (↵) a column (00~23) and the entire column will be registered.
  - Click (↵) a square box (top-left side between 'S' and '00') and all the rows/columns will be registered.

- Repeat the procedure for Camera Nos. 2 to 16. If user wants every camera to have the same mode, please click (↵) Copy to All Camera.
- Below lists symbols of the respective recording modes.

C Continuous

A Alarm In

A+ Alarm In / Continuous

A** Alarm In / PreAlarm

M Motion

M+ Motion / Continuous

M** Motion / PreAlarm

MA Motion / Alarm In

M+A Motion / Alarm In / Continuous

M**A Motion / Alarm In / PreAlarm

- Choose 'OK' to confirm the setting.

NOTE

Holiday (H) registration is done with a separate menu.

4.5.3 Pre Alarm

- Please click (↵) RECORD>Pre Alarm and the following will appear.
- Pre Alarm is effectively used when user selected recording mode by Alarm or Motion.
- The Pre Alarm will allow user to check, during playback, the previously recorded video before the record start time.

- Each frame on Title column shows camera title registered in DEVICES>Camera/PTZ. User cannot change camera titles here.

- Click (↵) each frame on Resolution column to select recording resolution of a corresponding camera. User may select one of **360x 240(288), 720x240(288), 720x480(576), 1280x720 and 1920x1080**
- Click (↵) each frame on Frames column to select recording rate of a corresponding camera. Recording rate varies by camera. Below lists the maximum recording rate of each camera.

Ness IQ-SDI Model	360x 240(288)	720x240(288)	720x480(576)	1280 x 720	1920 x 1080
4 Channel DVR	Max. 25 fps per Channel	Max. 25 fps per Channel	Max. 25 fps per Channel	Max. 12 fps per Channel	Max. 7 fps per Channel
8 Channel DVR	Max. 25 fps per Channel	Max. 25 fps per Channel	Max. 25 fps per Channel	Max. 12 fps per Channel	Max. 7 fps per Channel
16 Channel DVR	Max. 12 fps per Channel	Max. 12 fps per Channel	Max. 12 fps per Channel	Max. 7 fps per Channel	Max. 7 fps per Channel

- Click (↵) each frame on 'Quality' column to select recording quality of a corresponding camera. User may select its recording quality from **Super, High and Std**.
- Click (↵) each frame on 'Duration' column to select recording duration (i.e., **1 second ~3 hours**) of a corresponding camera.
- User may change the setting values of Resolution, Frames, Quality and Duration at a time by clicking the menu tab.
- Choose 'OK' to confirm the setting.

NOTE
The maximum recording frame is varied from different types of HD-SDI signal which can be input in to a DVR

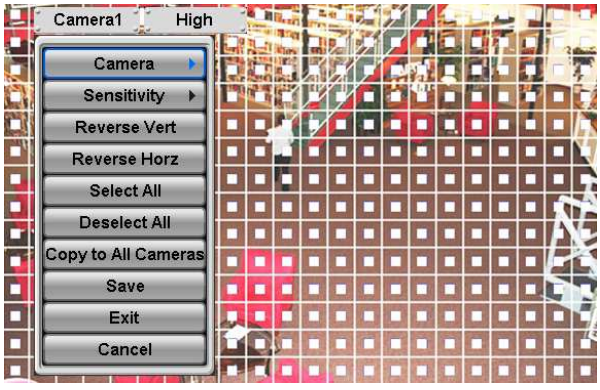
NOTE
A, B Types of DVR will detect 1080i, 1080p or 720p HD-SDI input signals automatically while it is booting. (Auto Detection).

NOTE
For 1080i signal input, it cannot be used together with 720p and/or 1080p. Also Live zoom function is not supported.

CAUTION
IF USER CONNECTS DIFFERENT TYPES OF HD-SDI SIGNALS WHILE DVR IS OPERATING. IT MAY CAUSE MALFUNCTIONS OF DVR.

4.5.4 Motion Detection

- Please click (↵) RECORD>Motion Detection and the following screen will appear.



- The Motion Detection menu will allow user to set Motion detection alarm.
- Press **SETUP** key (or right mouse button) and the SETUP menu will appear.
- SETUP menu descriptions.
  - **Camera:** select camera for setup.
  - **Sensitivity:** select sensitivity (Low, Normal and High)
  - **Reverse Vert:** activate the entire column at the cursor's position.
  - **Reverse Horz:** activate the entire row at the cursor's position.
  - **Select All:** active all blocks.

- **Deselect All:** deactivate all blocks.
- **Copy to All Cameras:** The present channel setup applies to all other cameras. Only when click save button, the changed setup can be saved.
- **Save:** save the new settings and go back to previous menu (page).
- **Exit:** ignore the new settings and go back to previous menu (page).
- **Cancel:** cancel Motion Setup menu.

• Choose 'OK' to confirm the setting.

4.5.5 Holiday

• Please click (↵) RECORD>Holiday and the following screen will appear.

• The Holiday menu will allow user to register holidays. Please follow the registration procedure below.

① Use arrow buttons in the Month Calendar to select Year and Month of holiday to be registered.
- ▶▶: search subsequent 'Year'
- ◀◀: search previous 'Year'
- ▶: search subsequent 'Month'
- ◀: search previous 'Month'

② Click (↵) on date user need to register as holiday.

③ Click (↵) ADD button and the date just clicked on will be copied to the Schedule frame for registration.

④ If wish to cancel the registration of a certain holiday, please click ☒ button next to the Schedule frame.

• Since holidays may vary every year, we recommend user to update on a regular basis.

• Choose 'OK' to confirm the setting.

4.6 LINK

• Please click (↵) LINK and the following screen will appear.

• The LINK menu will allow user to set recording modes of all kinds of alarms (Sensor, Motion Event, Video loss, System Event, etc.), alarm output, e-mail notification and the like.

4.6.1 Alarm In

- Please click (↵) LINK>Alarm In and the following screen will appear.
- Select cameras for recording while the motion sensor is in operation and alarm outputs and set up E-mail addresses for notification.
- Link Notification displays E-mail addresses registered in DEVICES>Network>Notification.
- Please follow the setup procedures below.

① Click (↵) Alarm In frame and select Alarm In 1.

② Select cameras for recording when Alarm In 1 is on. Please check ☑ a check box under Link Camera. More than two cameras can be set.

③ Select alarm outputs to be worked when Alarm In 1 is on. Please check ☑ a check box under Link Alarm Out. More than two alarm outputs can be set.

④ Select E-mail addresses for notification when Alarm In 1 is on. Please check ☑ a check box under Link Notification. More than two E-mail addresses can be set.

⑤ Repeat the above procedure for Alarm In 2~ Alarm In 16 (2 for **IQ-SDI 4 Channel** / Up to 16 for IQ-SDI 8/16 Channel).

- Choose 'OK' to confirm the setting.

4.6.2 Motion Event

- Please click (↵) LINK>Motion Event and the following screen will appear.

- Select cameras for recording while the motion sensor is in operation and alarm outputs and set up E-mail addresses for notification.
- Link Notification displays E-mail addresses registered in DEVICES>Network>Notification.
- Please follow the setup procedures below.

① Click (↵) Motion Event frame and select Motion Event 1.
② Select cameras for recording when Motion Event 1 is on. Please check ☑ a check box under Link Camera. More than two cameras can be set.
③ Select alarm outputs to be worked when Motion Event 1 is on. Please check ☑ a check box under Link Alarm Out. More than two alarm outputs can be set.
④ Select E-mail addresses for notification when Motion Event 1 is on. Please check ☑ a check box under Link Notification. More than two E-mail addresses can be set.
⑤ Repeat the above procedure for Motion Event 2~ Motion Event 16.

- Click (↵)By Duration box to set up the recording duration and prevent recording caused by event.
- The duration time can be controlled by previous setting mode: RECORD>Settings>Event
- Choose 'OK' to confirm the setting.

4.6.3 Video Loss

- Please click (↵) LINK>Video Loss and the following screen will appear.

- Select cameras for recording while the motion sensor is in operation and alarm outputs and set up E-mail addresses for notification.
- Link Notification displays E-mail addresses registered in DEVICES>Network>Notification.
- Please follow the setup procedures below.

① Click (↵) Video Loss frame and select Video Loss 1.
② Select cameras for recording when Video Loss 1 is on. Please check ☑ a check box under Link Camera. More than two cameras can be set.
③ Select alarm outputs to be worked when Video Loss 1 is on. Please check ☑ a check box under Link Alarm Out. More than two alarm outputs can be set.
④ Select E-mail addresses for notification when Video Loss 1 is on. Please check ☑ a check box under Link Notification. More than two E-mail addresses can be set.
⑤ Repeat the above procedure for Video Loss 2~ Video Loss 16.

- Click No Beep ☑ to deactivate alert sounds from video loss. Apply to all channels.
- Choose 'OK' to confirm the setting.

4.6.4 System Event

- Please click (↵) LINK>System Event and the following screen will appear.

- Select recording cameras and alarm outputs while Emergency recording using **EMERGENCY** key and set E-mail addresses for notification.
- Link Notification displays E-mail addresses registered in DEVICES>Network>Notification.
- Please follow the setup procedures below.
  ① System Event frame displays Emergency, which user does not have to change.
  ② Select cameras for recording when emergency occurs. Please check ☑ a check box under Link Camera. More than two cameras can be set.
  ③ Select alarm outputs to be worked when emergency occurs. Please check ☑ a check box under Link Alarm Out. More than two alarm outputs can be set.
  ④ Select E-mail addresses for notification when emergency occurs. Please check ☑ a check box under Link Notification. More than two E-mail addresses can be set.
- Choose 'OK' to confirm the setting.

4.6.5 Popup Link

- Please click (↵) LINK>Popup Link and the following screen will appear.

- When Motion or Alarm-In is detected, user can select a popup or beep sound for warning, or have a particular channel of interest to pop-up on Spot Screen.
- Please follow the setup procedures below.

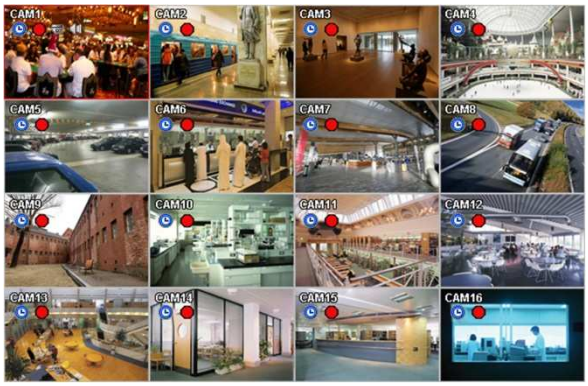
  ① Select camera
  ② **Popup**: Please Check ☑ a check box under making the popup screen for main monitor.
  ③ **Beep**: Please Check ☑ a check box under making beep sound.
  ④ **Spot**: Please Check ☑ a check box under making the popup screen for spot monitor.
- Click Copy to All Cameras button, then the present channel setup will apply to all other cameras.
- Choose 'OK' to confirm the setting.

5. OPERATING INSTRUCTIONS

5.1 Viewing

5.1.1 First Image

• Power on DVR and the following live video will appear, while viewing and recording at the same time.



• The screen will display date/time and icons below.

Icon	Description
	Continuous recording mode
	Event recording mode (Alarm In/Motion)
	In recording
	PTZ registration/PTZ mode
	In Audio recording
16	CMS Access Indication/No. of accesses (up to 16)
	In channel sequencing
	Setup in HDD Overwrite mode
1	Setup in HDD None Overwrite mode(recording)
1	Setup in HDD None Overwrite mode(HDD Full)

• On the right bottom side of the screen, disk usage will show by %.

• On the left low side of the screen, , 1, 1, , icon will show as the progress.

• At the normal state, HDD Overwrite mode is on and icon shows.

• When Overwrite mode is off Information>Record>Overwrite Setting), 1 will show. And when the disk becomes full, the icon will be changed to 1.

• Click Emergency recording button, icon will show.

• Click Audio button, icon will show. And click channel button, then user can change only audio channel.

NOTE

When front key does not work well, please check whether the audio icon is activated on the screen.

5.1.2 View Format

• The available view formats when the Main Monitor is in viewing mode include Full Screen, Split Screen, Channel Sequencing Screen and PIP screen.

– **Full Screen:** Please press camera select key (**1~16**) to view the corresponding camera image in full view format.

NOTE

Using a mouse: Double click to view the corresponding camera image in full view format and click one more time to back to Split Screen.

– **Split Screen:** Please press **DISPLAY** key and the available split screens (or multi-window view formats) will display alternately (i.e., 2x2, 3x3 and 4x4).

– **Channel Sequencing:** Please press **SEQUENCE** key to display images in sequencing view format periodically. This automatic sequence function is not limited to the full screen format, but can be used in any view mode. In the 8 channel DVR, 4-camera sequencing view mode is possible and in the 6 channel DVR, 4 or 9-camera sequencing view modes are possible.

5.1.3 Digital Zoom

• Select a Channel into Full Screen.
• Drag a portion to zoom by mouse.
• Double click mouse to exit zoomed screen.
• This function works only in the full screen. Users cannot use the digital zoom function in split screen format, channel sequencing mode or PIP mode.

5.1.4 Freeze Live Image

• Press **FREEZE** key while viewing live image to pause the image.
• The Freeze function works only in the full screen or split screen formats. Please do not use this function in channel sequencing mode or in PIP mode.

5.1.5 Pan / Tilt Control

• Press **PTZ** key to adjust PTZ cameras connected to DVR. Pan/Tilt mode is available only in the full screen format.

• In Pan/Tilt mode, the icon is displayed on the bottom of the screen.

• Following is the key usage found in Pan/Tilt mode.

Key	Function
▲ ▼ ◀ ▶	Up/Down/Left/Right rotation
Z −	Zoom out
+ Z	Zoom in
+ F	Focus near
F −	Focus far
I −	Iris Close
+ I	Iris Open
Set	Save Preset
Goto	Go to the Preset
Menu	Go to OSD main menu
Tour	Run Group Tour 1~9
Patt.	Run Pattern 1~9

• To use a mouse in Pan/Tilt mode, please move the cursor to the lower portion near the center of the screen. To use front button in Pan/Tilt mode, please push setup button. A key pad control will show as follows:

• To save current camera number, select Preset No and Set button click.

• To move to preset, select preset No and Goto button click.

• Available 1 ~ 255 Preset numbers can saved it depends on camera specification.

• As explained earlier in **4.4.2.,** press Menu button to pop-up PTZ camera OSD setup screen and set up Tour and Pattern items.
  - Since these functions make use of a memory function of the camera itself, user should set them in Camera OSD.
  - Once user completes the setup, close the Camera OSD menu.
  - User can conveniently use Tour and Pattern functions simply by clicking Tour and Pattern buttons.
  - Particulars on how to setup each function on OSD Menu are found in the manual of a corresponding camera.

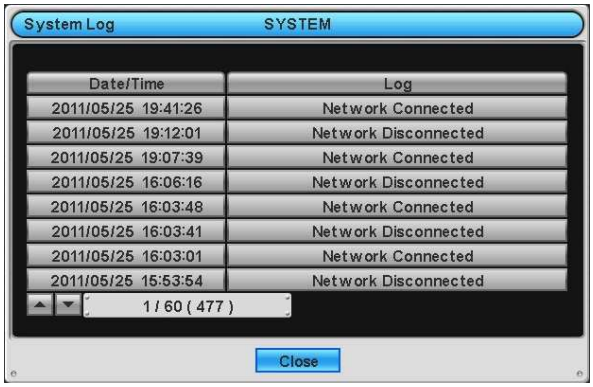
NOTE
Suppose a command for using Tour function is 71 ~ 79 + PSET and if you had set Tour to 70, use Preset No: 1 ~ 9 + Tour button to benefit the Tour function (70 + 1~9).

NOTE

It is required to set Menu as Preset number 95 from camera in order to call camera menu display by clicking 'menu' button or using 95+Goto button.

5.1.6 System Log

- Press **EVENT** key and the System Log screen will appear.



- Please refer 'SETUP>SYSTEM>System Log' to learn different events listed on the System Log and see how to delete the System Log.

5.1.7 Key Lock

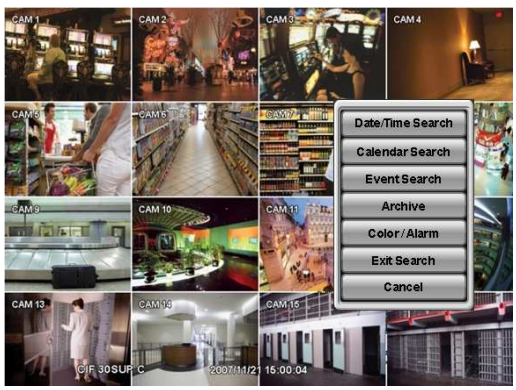
- Press **AUDIO**>**FF**>**FORWARD** keys in sequence to operate the key lock function. This function is indicated by icon in the lower portion on the right-hand side of the screen.
- Once the Key Lock function is activated, user cannot use any key. If wish to use a key, please enter the correct password to release the key lock function. If Password is not required, simply press ENTER ↵ key.

5.1.8 Emergency Recording

- When user presses **EMERGENCY** key, recording starts right away regardless of preset recording mode.
- Emergency recording is not operated while SETUP.
- Press Emergency key one more time to stop the emergency recording.

5.2 Search

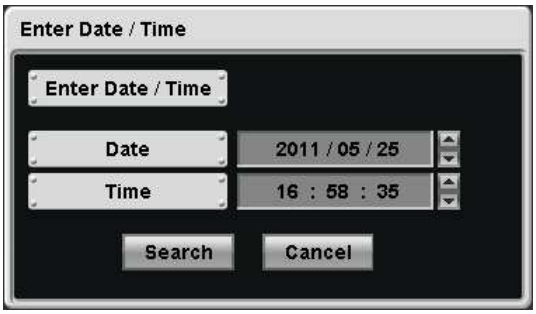
- This involves searching recorded video to playback the wanted video of a specific date and time.
- Press **SEARCH** key on the viewing screen, or Click Search menu at "Function Keys" and the following Search menu will appear.



• There are three ways to search video, i.e., by date/time and by calendar.
  – **Date/Time Search:** search by inputting date/time.
  – **Calendar Search:** search by using calendar.
  – **Event Search:** search by event.

5.2.1 Date / Time Search

• Please click (↵) Date/Time Search in SEARCH menu and the following input box will appear.

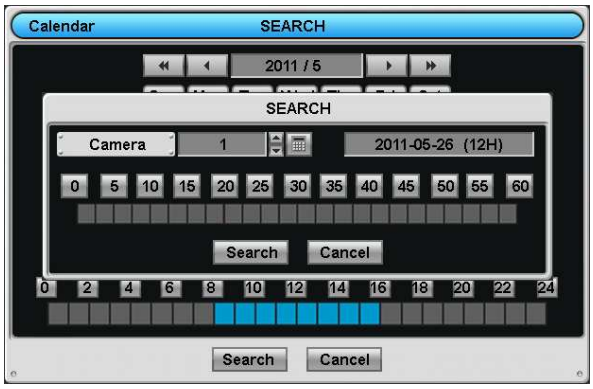


• Follow the procedure below to search video by date/time.
  ① Click (↵) the date and/or time whichever user needs to change and block the item. The designated item will be marked in a square.
  ② Click ▲, ▼ buttons on the right-hand side to adjust the values.
• Choose 'Search' to confirm the setting. Then, the selected video will be played back.
• Playback continues from the designated time until the last recording time.

5.2.2 Calendar Search

• Please click (↵) Calendar Search in SEARCH menu and the following input box will appear.

• Dates and Time with recorded data available will be high-lighted.
• Follow the procedure below to search video by calendar.
  ① Select Year and Month by using the arrow buttons in the calendar.
    – ▶▶: search subsequent 'Year'
    – ◀◀: search previous 'Year'
    – ▶: search subsequent 'Month'
    – ◀: search previous 'Month'
  ② Click (↵) a date. The date will be displayed in black color.
  ③ Click (↵) the box on the time indication bar to select the search time. The selected time zone will be focused in different color.
  ④ Click (↵) the selected time box to show pop-up window on the screen, If there is a recorded data.



⑤ The screen will show selected date/time.

⑥ Click ▲▼ button for selecting cameras.

⑦ Click then recorded data will be highlighted on the bar.

⑧ Selected camera will show the time bar 0-60 and It will be marked on 2.5minutes basis during selected time zone.

⑨ Click (↵) the high-lighted box on the time indication bar to select the start time of the video playback

• Click (↵) Search key to start playing back the selected video.

• Playback continues from the designated time until the last recording time.

NOTE

Click (↵) search button to show entire channel search based on different time frames

5.2.3 Event Search

• Please click (↵) Event Search in SEARCH menu and the following input box will appear.

• This involves searching recorded video to playback the selected video of a specific date and time.

• Press **SEARCH** key on the viewing screen, or use the mouse wheel (central button) and the following Search menu will appear.

① Designate Event Search start time.

② Designate Event Search end time.

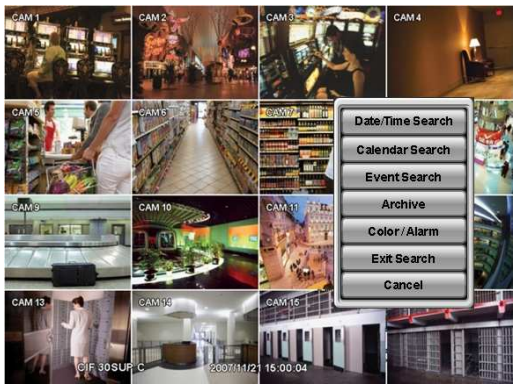
③ Select camera (video) to search data.

④ Check a check box (Motion / Alarm In / Emergency / Serial In) Check box.

⑤ Click on Search Index button to recorded search event data.

5.3 Playback

- This involves searching recorded video to playback the wanted video of a specific date and time in search mode.
- Press **SETUP** key or please press the mouse right button and click in Playback mode. Then, the following screen will appear.



- There are three ways to search video, i.e., by date/time and by calendar.
  - Date/Time Search: search by inputting date/time.
  - Calendar Search: search by using calendar.
  - Event Search: search by event.
- There are three other functions in playback mode;
  - Archive: The Archive function will allow user to copy the recorded video (moving images and still images) from a storage device (USB memory stick, DVD-RW).
  - Exit Search: From playback display to live display.
  - Cancel: Hide menu in playback mode.
- Playback mode runs in the available maximum number of split screen format. To change the viewing mode, please press **DISPLAY** key or **Camera Select** key (1~16).

NOTE

Using a mouse: Double click to view the full screen and double click one more time to back to Split Screen.

- Move the cursor of the mouse and the keypad control will appear at the bottom near the center of the screen.
- Every time user presses the **PLAY/PAUSE** key during playback mode, it is changed to '1X PLAY' and 'PAUSE'. The displayed sign on the screen also changes from to
- Following is the key usage found in playback mode. User may also use the keypad provided on the screen.

Go to Start		• Go to start of recorded data
REW		• Fast reverse playback (changes to x2, x4, x8, x16, x32, x64 and Extreme with each press)
BACKWARD		• Frame-by-frame reverse still image playback
PLAY		• Playback mode: 1X PLAY
PAUSE		• PAUSE
FORWARD		• Frame-by-frame forward still image playback
FF		• Fast forward playback (changes to x2, x4, x8, x16, x32, x64 and Extreme with each press)
Go to End		• Go to end of the recorded data

- Press **SEARCH** key to stop playing back video.

5.4 One-touch Playback

- Press the **PLAY/PAUSE** key or double click the mouse wheel (central button) in the viewing mode. Then, user will be able to view the wanted recorded video right away without going through the search procedure. The video plays back the recorded video from the last one minute. To stop playing back the video, please press **SEARCH** key.

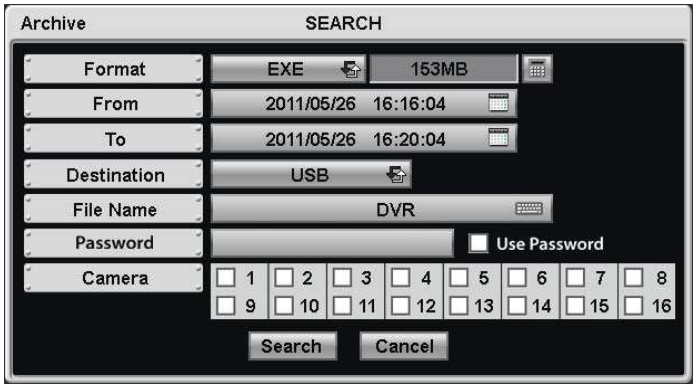
5.5 Digital Zoom in Playback

- Users are able to use Digital Zoon function in full screen playback.
- Drag a partition on to the screen, then the partition will enlarge as a full screen.
- Double click the left button of mouse to exit the zoom-in screen.

5.6 Archive

- The Backup function will allow user to copy the recorded video (moving images and still images) from a storage device (USB memory stick, DVD-RW).
- Please execute Backup Live or playback.
- Follow the backup procedure.

① Press **ARCHIVE** key. In case of using a mouse, please press the mouse right button and click in Archive. Then, the following screen will appear.



② Click (↵) Format frame to select EXE or JPEG. Choose EXE for storing moving images; and JPEG for still images.

③ Click (↵) the keyboard display on the right-hand side of FROM frame to set the storage start time.

④ Click (↵) the keyboard display on the right-hand side of TO frame to set the storage end time.

⑤ Click (↵) Destination frame to select a storage device out of USB and DVD-RW.

⑥ Click (↵) the keyboard display on the right-hand side of File Name frame to input a file name. User does not need to input extension (exe, jpeg). Please note that the file is not going to be stored unless user inputs a name.

⑦ To set the Password to the file that users want to save, mark the check box of “use Password”. Then, Click the keyboard button and set a password.

⑧ Check ☑ a check box next to a camera with the video that want to store. User can archive multi channel at the same time.

⑨ Click (↵) the Calculator button on the rightmost side of Format line to check the data capacity for backup. The capacity will show only for EXE Archive.4

⑩ Click (↵) Start button. Then, Progress bar will appear and the storage process proceeds. The progress bar does not show actual progress time. Depending on to the file size, it will appear again even after it shows 100%. It is important not to detach storage device until DVR displays “Archive Success” message.

⑪ If the storage is done properly, Archive Success message will pop up. Please choose ‘OK’ to confirm. If the storage fails, Archive Fail message will pop up. In this case, user must try again.

NOTE

Please do not use jpeg format selecting while archive in live mode.

NOTE

Please do not change the settings by DVR or CMS, while back up.

NOTE

When the target file size is over 2GB, press " Search " button on the right again after the first "ARCHIVE SUCCESS". And DVR will continue to archive to another file with the extension of "-002" Automatically added. In case of DVD media, change it after the first file is finished and press " Search " to continue to the rest of progress.

CAUTION

PLEASE DO NOT USE THE SPACE WHEN ENTER BACKUP FILE NAME.

CAUTION

WHILE BACKUP PROCEDURE, PLEASE DO NOT DETACH STORAGE DEVICE OR POWER OFF THE DVR. OTHERWISE, IT MAY CAUSE PERMANENT DAMAGE TO THE DVR OR THE STORAGE DEVICE. IN SCHOOL CASE, USER MUST REBOOT THE DVR. IF THE DVR DOES NOT OPERATE PROPERLY, USER MIGHT NEED TO CONTACT SERVICE CENTER.

5.7 Menu Bar

- Menu bar enables users to control all function as front button on the OSD screen.

- Move the mouse cursor to bottom around Date and Time indication then Menu bar will show up on the live screen.
- Each icon functions as below;

: Exit the Menu Bar

: Safely turn off the DVR

: Enter Archive mode

: Enter PTZ control mode

: Enter Setup mode

: Turn the display as 1 channel full screen. Additional click on full screen, it will change to next channel in sequence.

: Turn the display as 4 channels split screen. Additional click will change to the next four channels in sequence.

: Turn the display as 8 channels split screen. Additional click will change to the next eight channels in sequence.

: Turn the display as 16 channels split screen, There is no changes when additional click on 16 channels split screen.

: Select the multisport split mode by clicking MS and 1/4/9/16 buttons.

: Play Instant Playback

: Enter Calendar Search

: Date and Time Search

: Enter Event Search

: Showing current Date & Time

5.8 Alarm Out Control

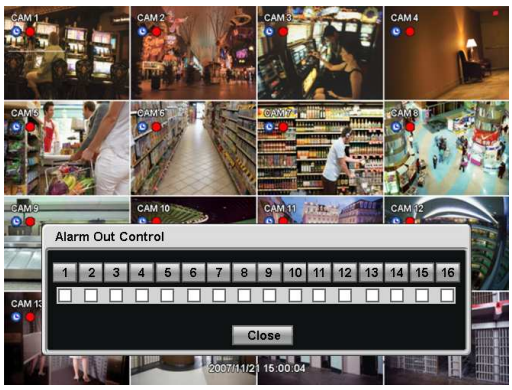
- Please click (↵) **Color / Alarm** in SEARCH popup menu or in front panel and the following input box will appear.

NOTE

This function is enabled only when **live mode** and **4 split screen mode or higher**.

NOTE

Generally all the devices have the same number of alarm out with its channels however, only 2 alarm controls are available for **type A**.



- Please click (↵) **Color / Alarm** in SEARCH popup menu or in front panel and the following input box will appear.
- Choose 'Close' to confirm the setting.

CAUTION

ALTHOUGH USERS TURN ITS SYSTEM SETTING TO DEFAULT, THE ANALOG OUTPUT WILL STAY PREVIOUS OUTPUT METHOD AND NOT EFFECT BY THE DEFAULT SETTING.

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